First Quarter 2005
Groundwater Monitoring Report

Pierson Building Center
Eureka, California
Case No. 12105
RWQCB Order R1-2004-0058

Prepared for:

Pierson Investment Company

Consulting Engineers & Geologists, Inc.

812 W. Wabash
Eureka, CA 95501-2138
707 / 441-8855

March 2005
091148.100

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Reference: 091148.100

March 9, 2005

Mr. Robert Stone
Humboldt County Division of Environmental Health
100 H St., Suite 100
Eureka, CA 95501

Subject: **First Quarter 2005 Groundwater Monitoring Report, Pierson Building Center, Eureka, California; Case No. 12105; RWQCB Order R1-2004-0058**

Dear Mr. Stone:

Presented herein are the results of the first quarter 2005 groundwater monitoring event conducted for the Pierson Building Center, 4100 Broadway, Eureka, California. Groundwater was monitored on January 14, 2005. Groundwater monitoring was performed by SHN Consulting Engineers & Geologists, Inc. at the request of the Humboldt County Division of Environmental Health.

If you have any questions, please call Roland Rueber or me at 707/441-8855.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

Patrick Barsanti

Patrick Barsanti
Project Manager

PNB/ADM/RMR:lms
Enclosure: Report
copy w/encl: Morgan Randall, Pierson Building Center
Bonnie Rollandelli, RWQCB
Andrew Locicero, Blue Rock Environmental
UST Cleanup Fund

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QA/QC:JJA_____

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Abbreviations and Acronyms

<	denotes a value that is “less than” the method detection limit
ft/ft	feet per foot
mg/L	milligrams per Liter
mV	millivolts
ppm	parts per million
ug/L	micrograms per Liter
AP	Assessor’s Parcel
BTS	Bishop's Truck Stop
DCO_2	Dissolved Carbon Dioxide
DO	Dissolved Oxygen
EB_#	soil sample-#
EC	Electrical Conductivity
EPA	Environmental Protection Agency
HB&M	Humboldt Base and Meridian
HCDEH	Humboldt County Division of Environmental Health
MNA	Monitored Natural Attenuation
DOT	Department of Transportation
MSL	Mean Sea Level
MTBE	Methyl Tertiary-Butyl Ether
MW-#	Monitoring Well-#
NA	Not Analyzed
NR	No Reference
ORP	Oxidation-Reduction Potential
PBC	Pierson Building Center
RWQCB	California Regional Water Quality Control Board, North Coast Region
SHN	SHN Consulting Engineers & Geologists, Inc.
TPHD	Total Petroleum Hydrocarbons as Diesel
TPHG	Total Petroleum Hydrocarbons as Gasoline
TPHPT	Total Petroleum Hydrocarbons as Paint Thinner
UST	Underground Storage Tank

1.0 Introduction

SHN Consulting Engineers & Geologists, Inc. (SHN) is submitting this quarterly groundwater monitoring report on behalf of Pierson Building Center (PBC) for the first quarter of 2005. This work was performed as requested by the Humboldt County Division of Environmental Health (HCDEH) and the California Regional Water Quality Control Board, North Coast Region (RWQCB).

This report describes the post injection groundwater monitoring. This section serves as an introduction and discusses the background of the site, provides the site description, and presents the objective of the work conducted. Section 2.0 describes the field program for the work conducted and Section 3.0 provides the results of the investigation. Section 4.0 summarizes the conclusions. Section 5.0 discusses our response to comments received from Blue Rock Environmental. Section 6.0 presents our recommendations, and Section 7.0 presents cited references.

1.1 Site Location

The PBC site is located at 4100 South Broadway, Eureka, Humboldt County (Assessor's Parcel [AP] #019-251-04), California. The site is located within the southwest 1/4 of Section 33, Range 1 West, Township 5 North, Humboldt Base and Meridian (HB&M) (Figure 1). One former Underground Storage Tank (UST) was located at the northern boundary of the property (Figure 2).

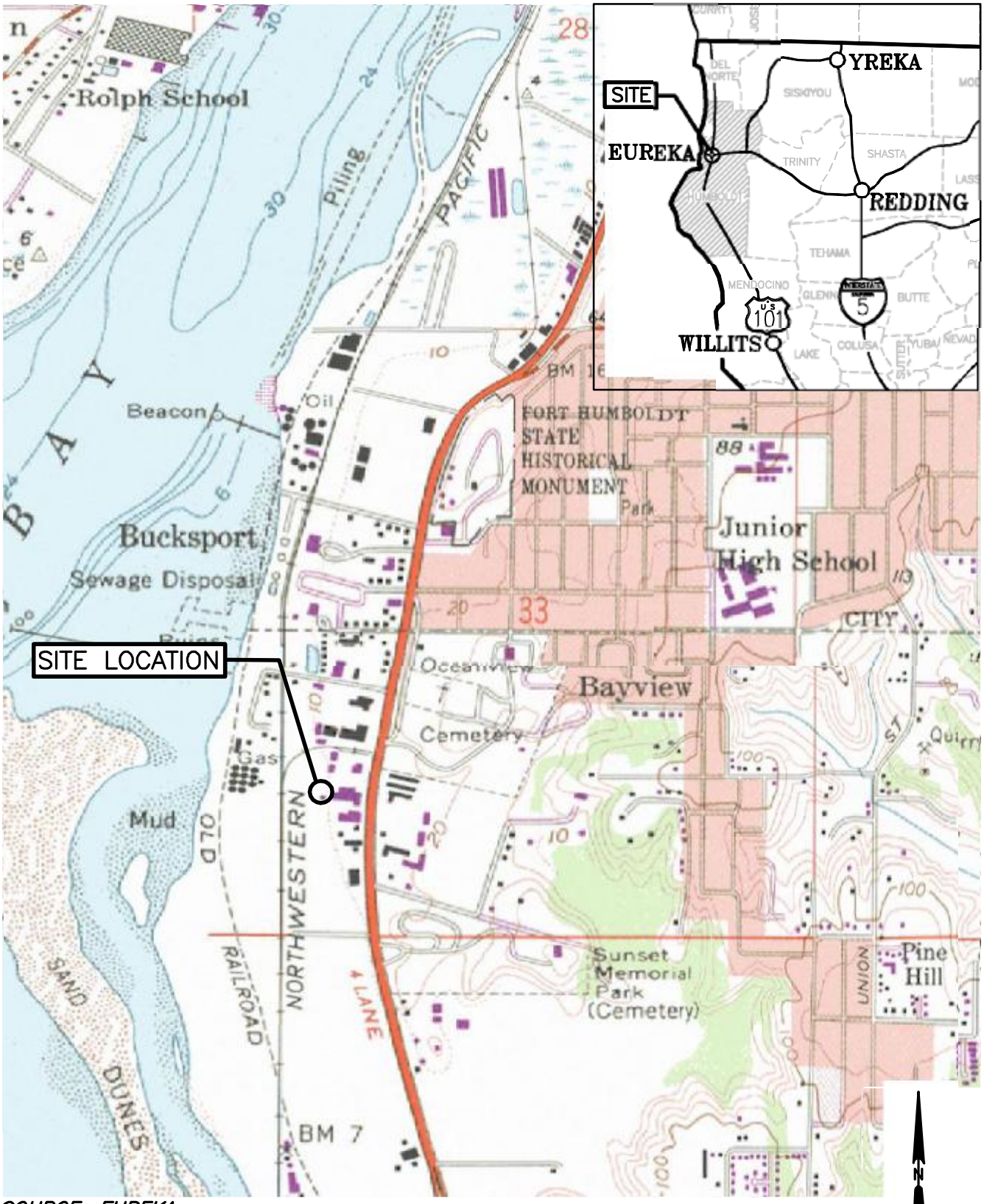
The Bishop's Truck Stop (BTS) site is located at 4050 Broadway (AP #019-251-06), just north of the Pierson property. The BTS site is a full service fueling station, and USTs exist on site. Formerly there were 4 USTs located along their southern property line, immediately adjacent to and northeast of PBC's former UST location (Figure 2). Currently, the BTS site is under investigation and several borings and monitoring wells have been installed, monitored, and sampled. Blue Rock Environmental is the consultant for Tamo and Renner who are the Responsible Parties for the BTS site. Big Oil and Tire is the current property owner, and is currently investigating the area adjacent to the existing USTs for hydrocarbon releases. Other businesses that operate on this adjacent site include: Gosselin Trucking, Masterson Communications, Pocket of Posies flower shop, and a freight storage and transfer business. Additionally, there was a former petroleum bulk tank farm located at the western portion of the BTS site.

1.2 Background

PBC is a retail hardware and lumber supply store that has operated at this location since 1946. PBC installed a 550-gallon UST in 1975, to store bulk paint thinner for retail sale. The paint thinner, product name "Mineral Spirits 75," was supplied by the Unocal Corporation. The permitted UST was used exclusively for paint thinner storage until 1987.

An application for a permit to close the UST was submitted to the HCDEH on April 29, 1987. During November 1987, the UST was closed in-place by Beacom Construction Company, and filled with concrete. The tank was subsequently removed in April of 1990.

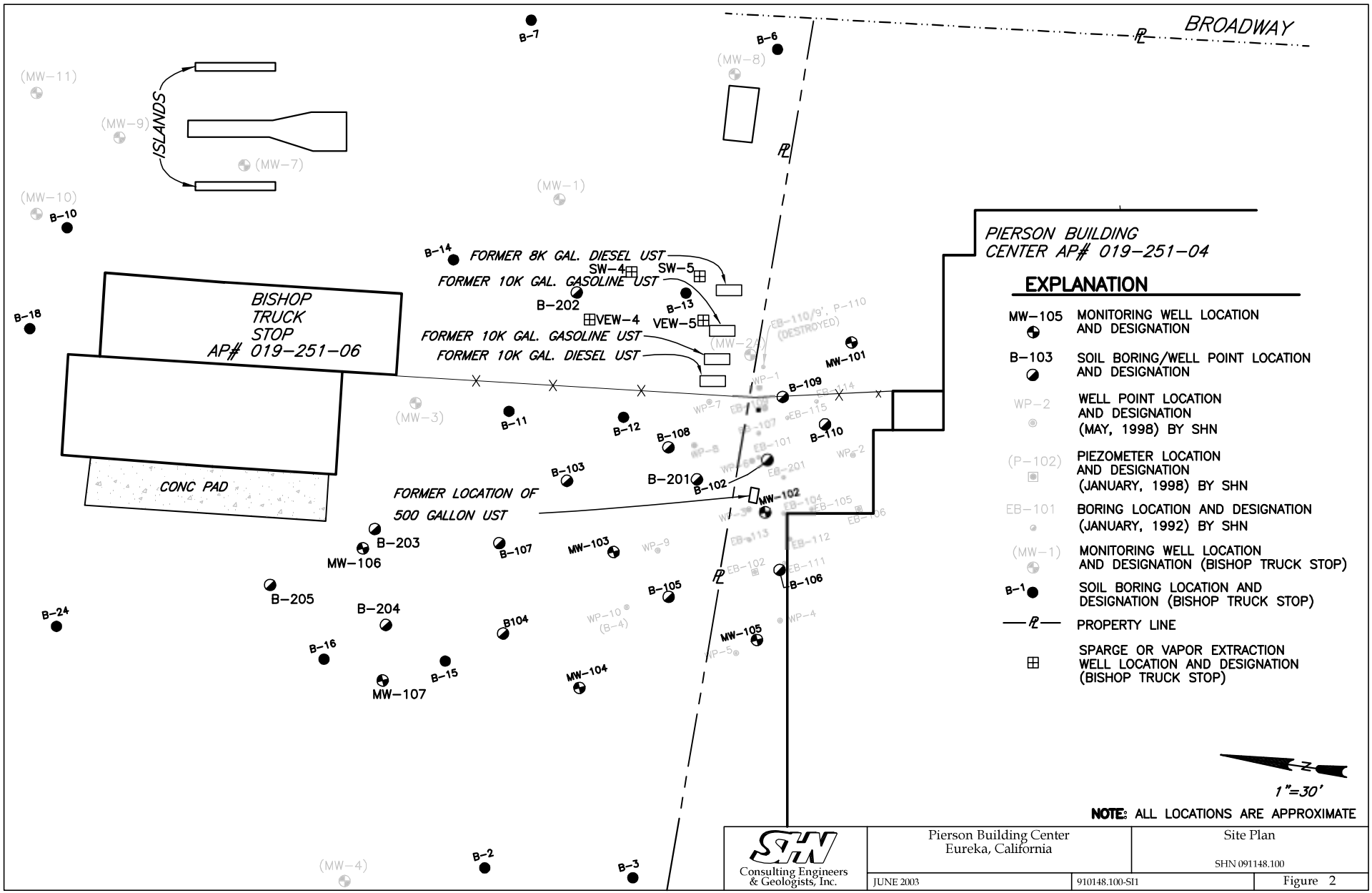
Several investigations have been performed at the PBC site and the BTS site. Based on the results of the previous investigations, there appears to be a commingled plume of paint thinner from the PBC



SOURCE: EUREKA USGS 7.5 MINUTE QUADRANGLE

1"=2000'±

SHN Consulting Engineers & Geologists, Inc.	Pierson Building Center Eureka, California		Site Location Map SHN 091148.100
	February, 2005	091148.100-LOCATION	Figure 1



SHN Consulting Engineers & Geologists, Inc.	Pierson Building Center Eureka, California	Site Plan SHN 091148.100
	JUNE 2003 | 910148.100-SI1	Figure 2

site and diesel and gasoline from the BTS site. A detailed description of previous site activities is presented in the 2001 ***Subsurface Investigation, Monitoring Well Installation, and Groundwater Monitoring Report*** (SHN, 2001).

On February 3 through 6, 2003, SHN supervised the injection of approximately 6,580 gallons of BioJet's® proprietary biosolution into the subsurface as part of the remedial action for the site (SHN, 2003).

On June 22, 2004, SHN supervised the injection of approximately 1,580 gallons of BioJet's® proprietary biosolution into the subsurface (SHN, August 2004).

On December 1, 2004, the RWQCB rescinded Waste Discharge Requirements Order No. R1-2002-0110 and monitoring and reporting program Order No. R1-2004-0058.

1.3 Objective

The objective of this investigation was to monitor groundwater to determine the effectiveness of the remedial action performed at the site.

The approved scope of work consisted of these tasks:

- Perform groundwater monitoring
- Submit data electronically to the Geotracker Database

2.0 Field Activities

On January 14, 2005, groundwater was monitored and sampled from 7 wells at the site. Groundwater samples were submitted to North Coast Laboratories in Arcata, California for laboratory analysis. SHN set up and coordinated all activities related to the project.

2.1 Monitoring Well Sampling

On January 14, 2005, SHN conducted quarterly groundwater monitoring of monitoring wells MW-101 through MW-107. As part of the groundwater-monitoring program, each well was measured for depth to groundwater, purged, and sampled. Prior to purging activities, Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP), and Dissolved Carbon Dioxide (DCO_2) were measured in each monitoring well. DO and ORP monitoring was conducted using portable instrumentation, and DCO_2 was measured using a field test kit. During purging, each well was monitored for Electrical Conductivity (EC), temperature, and pH using portable instrumentation. Upon completion of well purging activities, groundwater-monitoring wells were sampled. Each groundwater sample was collected using a disposable polyethylene bailer and transferred into laboratory-supplied bottles. Water samples were labeled, stored in an iced cooler, and transported to the laboratory under proper chain-of-custody documentation. Groundwater samples were analyzed using the methods discussed in the Laboratory Analysis section. Field notes and groundwater sampling data sheets are included in Appendix A.

2.2 Laboratory Analysis

Each groundwater sample was analyzed for:

- Total Petroleum Hydrocarbons as Diesel (TPHD) (C_{12} to C_{22}) and Total Petroleum Hydrocarbons as Gasoline (TPHG) (C_6 to C_{12}) in general accordance with U.S. Environmental Protection Agency (EPA) Method No. 3510
    - Total Petroleum Hydrocarbons as Paint Thinner (TPHPT) (C_8 to C_{12}) in general accordance with EPA Method No. 5030
    - Microbial enumeration using standard microbial plate count techniques on MW-102 and MW-103

Groundwater samples were transported to North Coast Laboratories, of Arcata, California (NCL) for analysis. Microbial enumeration was performed by BioJet® of Ione, California.

2.3 Equipment Decontamination Procedures

All equipment was cleaned prior to bringing it on site. All small equipment that required on-site cleaning was cleaned using the triple wash system. The equipment was first washed in a water solution containing Liquinox® cleaner, followed by a distilled water rinse, then by a second distilled water rinse.

2.4 Investigation-Derived Waste Management

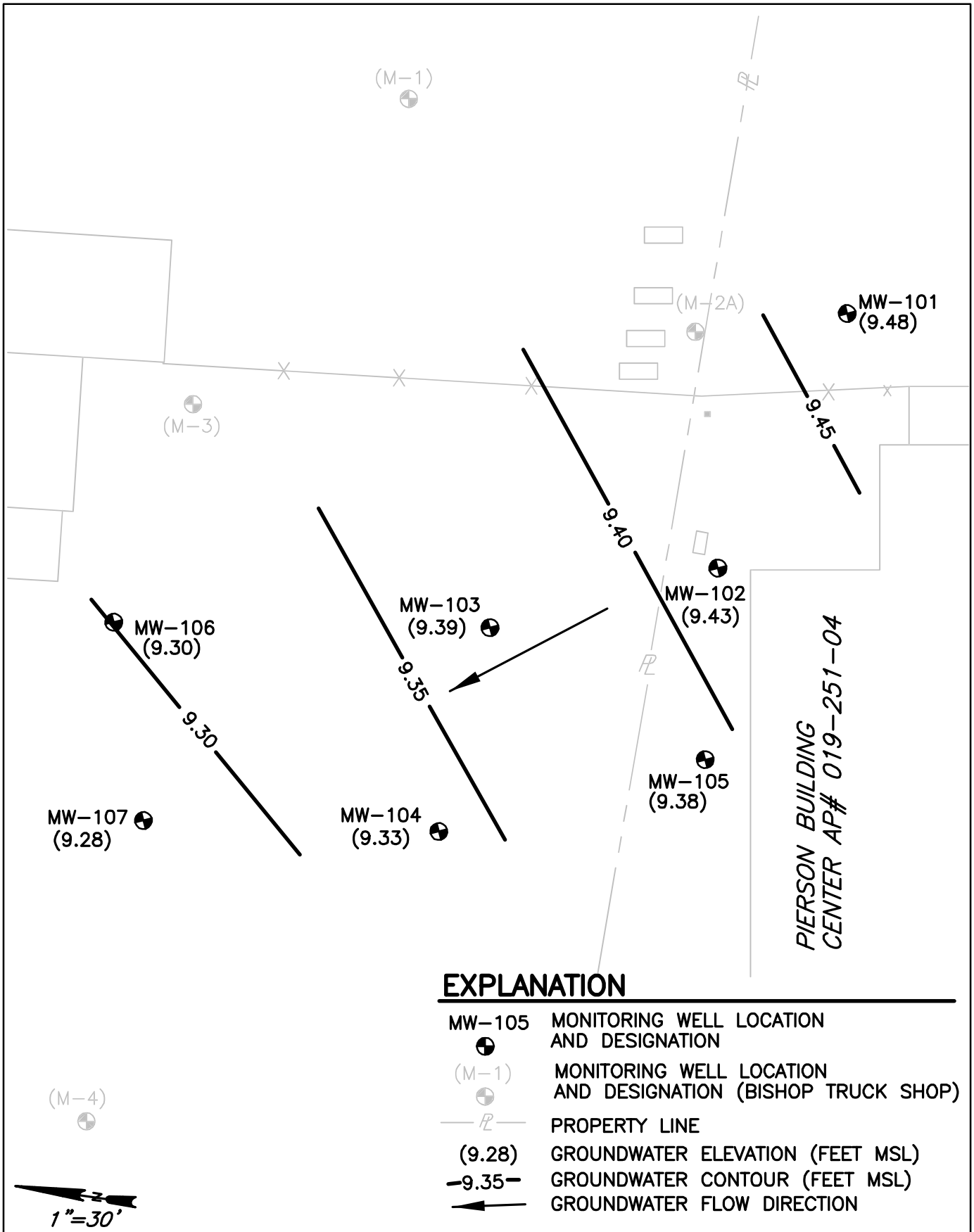
Water used in the decontamination of equipment, tools, and all purge water was contained in approved Department of Transportation (DOT) 17 E/H, 55-gallon drums. The water was transported to SHN's purge water storage facility and will be discharged, under permit, to the City of Eureka Wastewater collection system. Approximately 40 gallons of water was generated during the first quarter 2005 monitoring event. A discharge receipt from the first quarter 2005 groundwater-monitoring event will be included in a future report. A discharge receipt from the fourth quarter, 2004 groundwater monitoring event is included in Appendix A.

3.0 Groundwater Monitoring Results

3.1 Hydrogeology

On January 14, 2005, the direction of groundwater flow was to the northwest, with an approximate gradient of 0.001 feet per foot (ft/ft). Figure 3 presents a map showing the groundwater configuration on January 14, 2005.

Table 1 summarizes groundwater elevation data. Historic data are included in Appendix B.



Consulting Engineers & Geologists, Inc.	Pierson Building Center Eureka, California		Groundwater Contours January 14, 2005 SHN 091148.100
	February, 2005	910148.100-GWC-JAN-05	Figure 3

Table 1 Groundwater Elevations, January 14, 2005 Pierson Building Center, Eureka, California			
Sample Location	Top of Casing Elevation (feet MSL[1])	Depth to Groundwater[2] (feet)	Groundwater Elevation (feet MSL)
MW-101	15.69	6.21	9.48
MW-102	14.81	5.38	9.43
MW-103	14.83	5.44	9.39
MW-104	14.09	4.76	9.33
MW-105	13.78	4.40	9.38
MW-106	15.59	6.29	9.30
MW-107	14.28	5.00	9.28

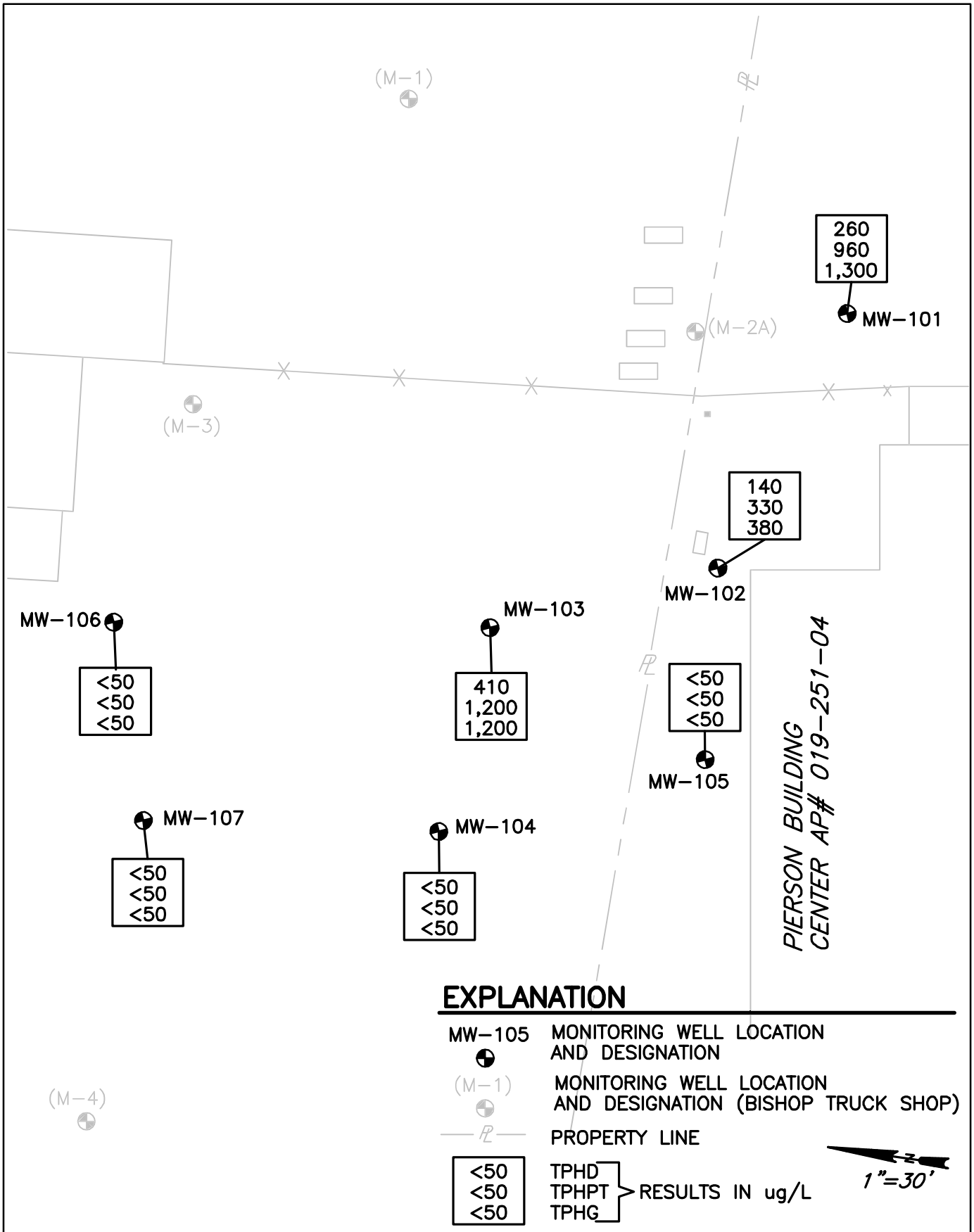
1. MSL: Mean Sea Level 2. Below top of casing

3.2 Groundwater Analytical Results

Groundwater analytical data for the January 14, 2005, monitoring event are summarized in Table 2 and Figure 4.

Table 2 Groundwater Analytical Results, January 14, 2005 Pierson Building Center, Eureka, California (in ug/L)[1]			
Sample Location	TPHD[2]	TPHPT[3]	TPHG[4]
MW-101	260[5,6]	960[7]	1,300[8]
MW-102	140[5,6]	330[7]	380[8]
MW-103	410[5,6]	1,200[7]	1,200[8]
MW-104	<50[9]	<50	<50
MW-105	<50	<50	<50
MW-106	<50	<50	<50
MW-107	<50	<50	<50

1. ug/L: micrograms per Liter
2. TPHD: Total Petroleum Hydrocarbons as Diesel analyzed in general accordance with EPA Method No. 3510.
3. TPHPT: Total Petroleum Hydrocarbons as Paint Thinner analyzed in general accordance with EPA Method No. 5030.
4. TPHG: Total Petroleum Hydrocarbons as Gasoline analyzed in general accordance with EPA Method No. 5030.
5. Samples contain some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights.
6. Samples contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.
7. Samples do not present a peak pattern consistent with that of paint thinner. The reported results represent the amount of material in the paint thinner range.
8. Samples do not present a peak pattern consistent with that of gasoline. The reported results represent the amount of material in the gasoline range.
9. <: denotes a value that is “less than” the method detection limit.



Consulting Engineers & Geologists, Inc.	Pierson Building Center Eureka, California		Groundwater Analytical Results January 14, 2005 SHN 091148.100
	February, 2005	910148.100-GAR-JAN-05	Figure 4

Low to moderate concentrations of petroleum hydrocarbons were detected in groundwater from monitoring wells MW-101, 102, and 103.

Microbial plate counts for heterotrophic and selective degraders were performed on groundwater samples from MW-102 and MW-103. Selective degraders were determined by adding a mixture of gasoline, paint thinner, and diesel to the plate. Results are presented in Table 3. Historic data are included in Appendix B. Laboratory analytical reports are included in Appendix C.

Table 3
Microbiological Plate Counts, January 14, 2005
Pierson Building Center, Eureka, California

Sample Location	Heterotrophic ($1.00x10^5$)	Selective ($1.00x10^5$)	% Degraders
MW-102	9.1	2.1	23.08
MW-103	7.2	3.5	48.61

3.3 Natural Attenuation Parameters

Monitoring for indicators of biodegradation was performed on groundwater from site wells during the January 14, 2005, monitoring event. During the January 2005 monitoring event, DO concentrations ranged from 0.91 parts per million (ppm) in monitoring well MW-101, to 5.02 ppm in monitoring well MW-105, indicating that aerobic biodegradation may be occurring on site. DCO_2 concentrations ranged from 15 ppm in monitoring well MW-105, to 50 ppm in monitoring well MW-103. ORP measurements ranged from 65 millivolts (mV) in monitoring well MW-105, to 114 mV in monitoring well MW-106, indicating that mildly oxidizing conditions are present.

Results are presented in Table 4. Historic DO, DCO_2, and ORP measurement results are included in Appendix B.

Table 4
DO, DCO_2, and ORP Measurement Results, January 14, 2005
Pierson Building Center, Eureka, California

Sample Location	DO[1] (ppm)	DCO_2[1] (ppm)[2]	ORP[1] (mV)[3]
MW-101	0.91	25	72
MW-102	1.08	40	91
MW-103	0.98	50	103
MW-104	1.73	45	74
MW-105	5.02	15	65
MW-106	1.65	40	114
MW-107	0.99	40	111

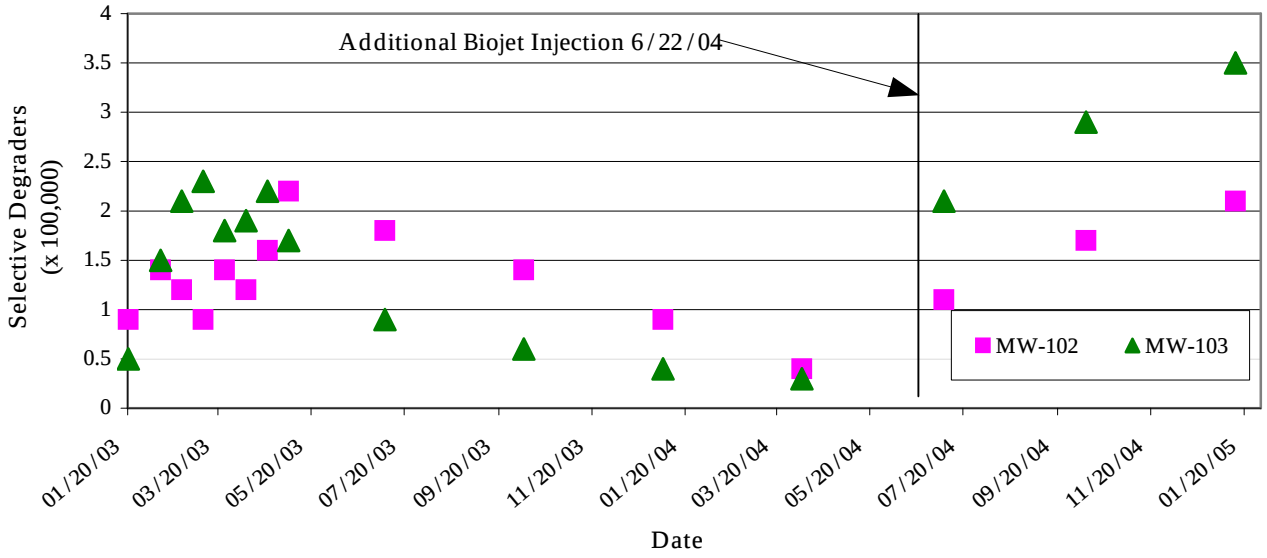
1. Dissolved Carbon Dioxide (DCO_2), Dissolved Oxygen (DO), and Oxidation-Reduction Potential (ORP) measured with portable equipment.
2. ppm: parts per million
3. mV: millivolts

4.0 Conclusions

These conclusions are based upon the information presented.

- When compared to results from the last sampling event, petroleum hydrocarbon concentrations have decreased slightly in groundwater samples collected from monitoring wells MW-101 and MW-102, and MW-103.
- The population of selective microbial degraders has increased in MW-102 and MW-103 when compared to results from the fourth quarter 2004 populations (Figure 5).

Figure 5
Selective Microbial Degraders
Pierson Buidling Center, Eureka, California



5.0 Response to Blue Rock's Fourth Quarter 2004 Groundwater Monitoring- Remedial Systems Operations Report and Additional Commingled Plume Evaluation

The following are SHN's response to the Blue Rock Report. Statements from Blue Rock are in italics followed by our response:

- ***Soil analytical data collected by SHN from soil boring EB-113 located downgradient (west) of the former paint thinner UST indicated the highest concentration of sorbed-phase TPHg…***

  The soil sample from EB-113 was collected in January 1992 from a depth of 6.9 feet below grade. Based on the water levels in MW-102 and MW-105, this sample was collected from within the saturated zone, therefore contamination detected was from both sorbed and

dissolved phase contamination. The former UST at Piersons was used exclusively for paint thinner storage, not gasoline, and the high TPHG detected in this sample was likely an overlap from TPHPT into the quantified gasoline range.

- ***Table 1 of the fingerprinting analysis performed by Friedman & Bruya did not include naphthalene and trimethylbenzene and other compounds of interest…***

  A complete list of analytes was included in the January 27, 2004 report from Freidman & Bruya. Naphthalene and trimethylbenzenes were detected in the samples from MW-2A-Post and MW-101-Post. Naphthalene was detected in the sample from MW-103-Post. Naphthalene and trimethylbenzenes were not detected in the groundwater sample from MW-102-Post. With the exception of chloroform, all compounds detected by EPA Method 8260B in the sample from MW-102-Post were present in the samples from MW-101-Post, MW-103-Post, and MW-2A-Post.

- ***The compounds discussed in the lab text are also in paint thinner.***

  As paint thinner and gasoline are comprised of similar individual constituents, it is difficult to determine the amount of paint thinner present at the site. However, isooctane was detected in the groundwater samples from MW-101-Post, MW-103-Post, and MW-2A-Post. Isooctane is an important compound that differentiates gasoline from other light petroleum products (Zymax, 2000).

- ***The natural attenuation monitoring data show that dissolved oxygen (DO) is low within the PBC TPHpt plume. DO in the TPHpt plume wells does not exceed 1 ppm, and the maximum DO recorded in their well network was 1.56 ppm. It is generally accepted that DO levels need to be sustained above 1 ppm at the minimum to support ongoing aerobic biodegradation of petroleum hydrocarbons…***

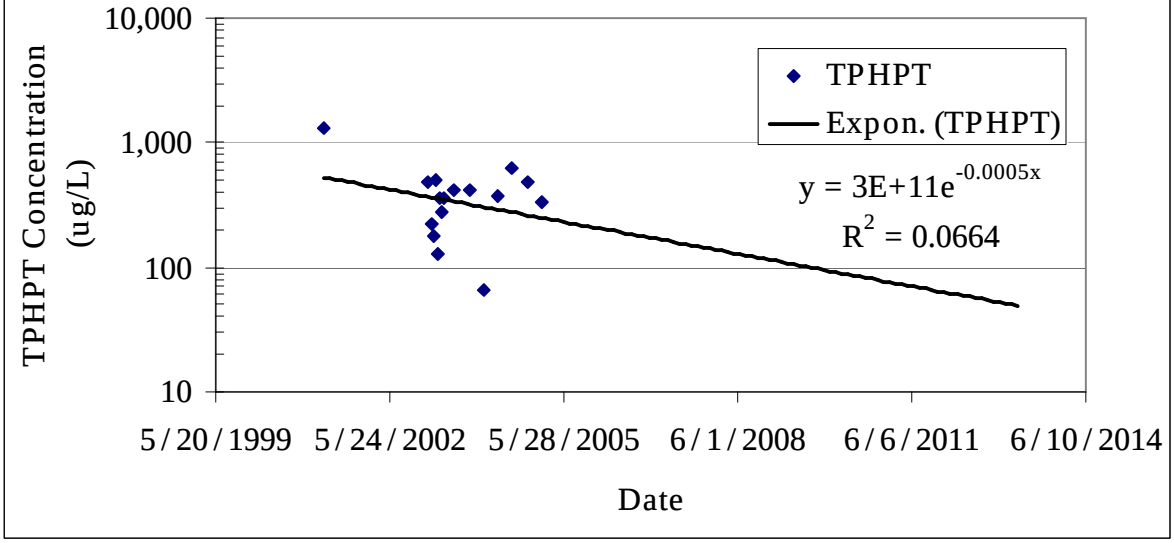
  Monitored Natural Attenuation (MNA) is the reduction in mass or concentration of a chemical in groundwater over time or distance from the source of contamination due to naturally occurring physical, chemical, and biological processes (Barden, 2002). These processes include dispersion (dilution), sorption of contaminants to soil particles, volatilization, biodegradation of contaminants by naturally occurring or introduced organisms under aerobic or anaerobic conditions, or abiotic degradation/transformation (Wiedemeier, 2002). Three lines of evidence (Wiedemeier et al., 1999) that can be used to support MNA are:

  1) Documented loss of contaminants in monitoring wells over time
  2) Contaminant and geochemical analytical data
  3) Direct microbiological evidence

  Concentrations of TPHPT have been declining in groundwater samples from MW-102. A graph showing the TPHPT concentrations through time is shown on Figure 6. Concentrations versus time rate constants are used for estimating how quickly remediation goals will be met at a site (Newell et al., 2002). The rate constants are derived from plotting the concentration of the contaminant versus time, fitting a best-fit line to the data, and

calculating the slope of the line. The rate constant is then used to estimate when a particular water quality goal will be achieved. These procedures are detailed in ***Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies*** (Newell et al., 2002).

Figure 6
TPHPT Concentrations Through Time, MW-102
Pierson Building Center
Eureka, California



TPHPT concentration data versus time was plotted from MW-102 and a trend line was calculated using an excel spreadsheet. Trend lines were calculated using all the available groundwater analytical data. Using the derived rate constants and a water quality goal of 50 ug/L, the estimated time to achieve the goal was calculated. The estimated time to achieve water quality goals is approximately eight years. Based on these calculations, it is conservatively estimated that TPHPT concentrations in MW-102 will reach water quality goals within ten years.

Table 5 shows trends expected in geochemical data from groundwater when MNA is occurring, and compares data from MW-102 and MW-103 to background conditions at MW-105 collected in July 2004. Dissolved oxygen is the favored electron receptor used in the biodegradation of petroleum hydrocarbons. As dissolved oxygen is depleted within the contaminant plume, nitrate, iron (III), and sulfate are used for electron acceptors for anaerobic degradation (Wiedemeier et al., 1999). The average DO concentration for MW-102 is 0.93 ppm, and for MW-103 is 1.3 ppm. The data indicate that MNA is occurring at the PBC site.

Table 5
Monitored Natural Attenuation Indicator Comparison, August 2004
Pierson Building Center
Eureka, California

Groundwater Bioremediation Parameter	Units	Expected Trend for Source Well Related to Background	Source Well MW-102	Down-gradient Well MW-103	Background Well MW-5	Consistent with Trend
Dissolved Oxygen	ppm[1]	Decreases	0.52	0.85	1.43	Yes
Dissolved Carbon Dioxide	ppm	Increases	50	NM[2]	45	Yes
Oxidation-Reduction Potential	mV[3]	Decreases	0	9	100	Yes
Dissolved Iron	ug/L[4]	Increases	4,600	13,000	<100	Yes
Nitrate	mg/L[5]	Decreases	<0.10	<0.10	0.81	Yes

1. ppm: parts per million
2. NM: Not Measured
3. mV: millivolts
4. µg /L: micrograms per Liter
5. mg/L: milligrams per Liter

Microbial plate counts for heterotrophic and selective degraders indicate that populations of hydrocarbon degrading organisms are present within the TPHPT plume.

- ***A TPHpt concentration of 4,300 ug/L was detected in MW-103, which has been depicted as downgradient from the PBC paint thinner UST. This is concerning because these levels are relatively high and are impacting the BTS site.***

Data from the January 2005 groundwater-monitoring event show concentrations of TPHD, TPHPT, and TPHG in the groundwater samples from monitoring well MW-103 at concentrations of 410, 1,200 and 1,200 ug/L, respectively. MW-103 is also downgradient of the former UST's at the BTS site, and the highest concentrations of petroleum hydrocarbons are present in monitoring well MW-2A. The TPHPT present in MW-103 may be related to TPHG from the former UST's at the BTS site, due to the overlap of hydrocarbon ranges in the analysis for TPHG and TPHPT. TPHD, TPHPT, and TPHG were detected in groundwater samples from MW-101 at concentrations of 260, 960, and 1,300 ug/L, respectively. Isooctane was detected in groundwater samples from MW-101 and MW-103 and indicates the presence of gasoline in these wells (SHN, March 2004). It is unlikely that the former paint thinner UST has impacted the upgradient well MW-101, as no TPHPT was detected in the groundwater sample from B-110, which is located between MW-102 and MW-101. Petroleum hydrocarbons detected in MW-101 are more likely to have originated from the former UST's at the BTS site.

- ***There is no summary of theoretical (i.e. stoichiometric) paint thinner degradation using BioJet.***

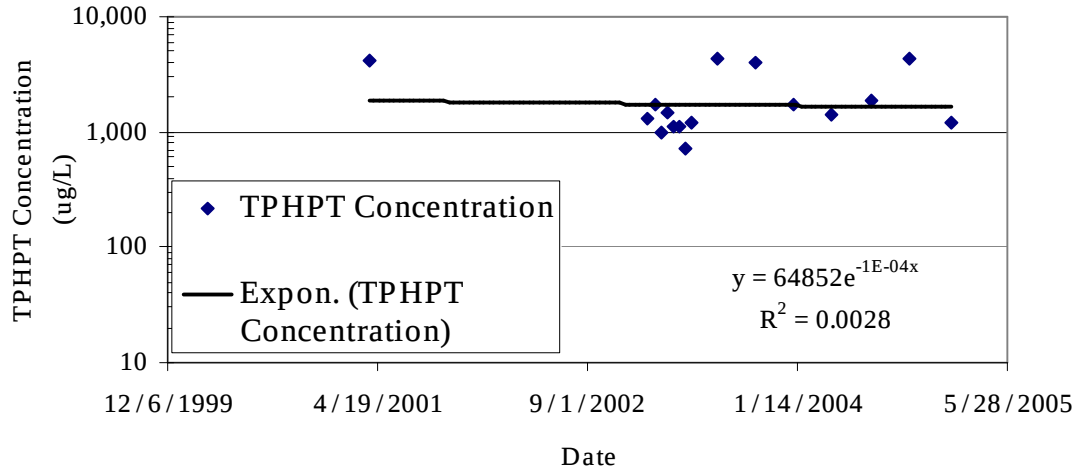
As with gasoline and diesel, paint thinner is a complex mixture of numerous individual compounds. Stoichiometric degradation calculations can be made for individual compounds such as benzene or toluene, but due to the number of individual compounds that comprise paint thinner calculations are not possible. Bench scale tests were performed

on soil samples from the PBC site, and showed that the Biojet solution was capable of degrading the TPHD, TPHPT and TPHG present within the commingled plume (SHN, 2002).

- ***Wells MW-101, MW-102, and MW-103 do not show any decrease of TPHpt over time.***

  Well MW-101 is upgradient of the TPHPT source area, and petroleum hydrocarbons present in this well are more likely from the former UST's at the BTS site. As shown in Figure 6, TPHPT concentrations in MW-102 have decreased through time. A shown in Figure 7, TPHPT concentrations in MW-103 have a slightly decreasing trend line. The amount of paint thinner (if any) in MW-103 could not be determined from the hydrocarbon fingerprinting, and the presence of isooctane in the groundwater sample from MW-103 indicates that gasoline from the former UST's at the BTS site have impacted this well (SHN, March 2004).

Figure 7
TPHPT Concentrations Through Time, MW-103
Pierson Building Center
Eureka, California



- ***Using SHN's own equations for calculation of pre- and post-remedial TPHpt masses, no reduction in TPHpt mass is observed….***

  Blue Rock performed revised mass calculations using data from the October 2004 groundwater monitoring event at the PBC, compared the results to the pre-injection mass calculations performed by SHN, and concluded that there was no reduction in TPHPT mass at the PBC site. The TPHPT results from MW-102 in October 2004, which were used for the calculations, were slightly higher (490 ug/L) than the pre-injection concentration from

January 20, 2003 (480 ug/L), therefore the total mass of TPHPT was slightly higher. Using the most recent TPHPT result from MW-102 in the calculations (330 ug/L), the overall mass will be less than the pre-injection mass.

- ***Further, SHN indicates that natural attenuation of the residual TPHpt plume will continue over time, yet their own data show an ongoing decline in the population of selected hydrocarbon degraders used to support concept of ongoing natural attenuation.***

  In the fourth quarter 2004 groundwater monitoring report (SHN, November 2004), the populations of selective hydrocarbon degrading organisms were reported to be greater than the previous sampling event (July 2004), and have increased since (Figure 5). While the populations peaked and declined after the first injection event, the populations have been increasing since the second injection event. As previously stated, natural attenuation processes consist of various mechanisms to reduce hydrocarbon mass, and MNA does not rely solely on microbes to degrade contaminants.

- ***Finally, Blue Rock in unaware of any confirmation soil sampling performed…***

  Our effort was to remediate groundwater and soil so that contamination is not a threat to groundwater, therefore remediation effectiveness can be observed through groundwater sampling results. Sorbtion of dissolved contamination onto the aquifer matrix results in a reduction of dissolved contaminant concentrations in groundwater (Wiedemeier et at., 1999). Any residual sorbed phase mass that is present at the site will slowly degrade through time. Groundwater at MW-102 is estimated to achieve a water quality goal of 50 ug/L (which is the listed water quality goal for gasoline (Marshack, 2003)) in approximately ten years. As long as any sorbed phase contamination remains sorbed to soil, the contamination is not a threat to impact water quality. If the contamination desorbs, it will be remediated through natural attenuation mechanisms, which we have demonstrated are occurring at the Pierson site.

6.0 Recommendations

SHN is recommending the site for closure. The rational for closure is as follows:

- The source of contamination (paint thinner UST) was removed. The UST was used exclusively for paint thinner storage.
- The site has been adequately characterized. The extent of soil and groundwater contamination related to the former paint thinner UST has been defined.
- The groundwater gradient at the site is relatively flat and groundwater flow direction has been consistently to the west or northwest.
- Petroleum hydrocarbons have not been detected in monitoring wells MW-104 and MW-105, which are downgradient of the former paint thinner UST.
- Based on the results of the hydrocarbon fingerprinting, groundwater flow directions, and contaminant concentrations, it appears that the magnitude of the release from the former Bishop UST complex was much greater than that from the Pierson UST. The release from the former Bishop UST complex has impacted groundwater in the vicinity of monitoring wells MW-2A, MW-101 (upgradient of the paint thinner release), and MW-103 (downgradient of the paint

thinner release). The presence of MTBE in MW-106 and MW-107 indicate hydrocarbon contamination in groundwater samples from these wells may be from the Bishop site (SHN, March 2004).

- The injection of BioJet's® proprietary biosolution was effective in enhancing the degradation of petroleum hydrocarbons at the site. However, due to the impact from the former Bishop UST complex, petroleum hydrocarbons continue to be detected in groundwater at the site.
- The active remediation occurring at the BTS site will continue to remove petroleum hydrocarbons that have migrated onto the Pierson site and will remove the source contributing to contamination in MW-103.
- Natural attenuation mechanisms are active at the site, and will continue to degrade residual groundwater contamination. Groundwater quality goals will be achieved in MW-102 within ten years.
- No sensitive receptors have been, or are likely to be, impacted from the former paint thinner UST.
- The majority of the site is capped and, therefore, any potential exposure to residual soil contamination related to the former paint thinner UST has been mitigated. If any subsurface construction occurs in this area, any petroleum hydrocarbon impacted soil will be disposed of appropriately.

In summary, the site has been adequately characterized, remediated, and has successfully demonstrated, through verification monitoring, that no threat to sensitive receptors is present. No further groundwater monitoring events are planned for the site.

Therefore, SHN recommends that the HCDEH and the RWQCB issue a "no further action" letter for the Pierson site. Upon approval of the "no further action" letter, SHN will coordinate the destruction of the monitoring wells at the site.

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Appendix A

Field Notes

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480 Henrsted Drive • Redding, CA 96002• Tel: 530.221.5424 • FAX: 530.221.0135 •E-mail: shninfo@shn-redding.com
812 W. Wabash • Eureka, CA 95501 • Tel: 707.441.8855 • FAX: 707.441.8877 •E-mail: shninfo@shn-engr.com

DAILY FIELD REPORT

JOB NO 091148.100
Page 1 of 11

PROJECT NAME Pierson's	CLIENT/OWNER Pierson's Building Center	DAILY FIELD REPORT SEQUENCE NO 1	
GENERAL LOCATION OF WORK Eureka, CA.	OWNER/CLIENT REPRESENTATIVE Morgan Randall	DATE 1-14-05	DAY OF WEEK Friday
TYPE OF WORK Quarterly Sampling	WEATHER Overcast	PROJECT ENGINEER/ SUPERVISOR Pat Barsanti / Roland Rueber	
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED	TECHNICIAN David R. Paine	

DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, & COMPACTING

0743	ARRIVED at site, Removed lids and caps on 7 wells, All wells except MW-104 had water in flush mount, bailed out.
0836	started taking water levels decoming the sounder after each well by scrubbing it with liquinox then rinsing it with DI water.
0859	started taking DO Readings.
0954	started purging MW-106 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1019	started purging MW-107 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1110	sampled MW-106, secured well with cap and lid.
1108	started purging MW-104 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1135	sampled MW-107, secured well with cap and lid.
1147	started purging MW-105 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1215	sampled MW-104, secured well with cap and lid.
1226	started purging MW-102 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1300	sampled MW-105, secured well with cap and lid.
1312	started purging MW-103 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1345	sampled MW-102, secured well with cap and lid.
1355	started purging MW-101 with a disposable bailer, purge water was caught in a graduated 4 gal. bucket.
1425	sampled MW-103, secured well with cap and lid.
1435	sampled MW-101, secured well with cap and lid.
1454	OFF SITE
Note	All decon water and purge water was caught then poured into a 55 gal. plastic drum that I brought in the truck then transported to SHN's 1000 gal. PWST located at 812 W. Wabash Avenue. Eureka, CA 40 gallons total.

COPY GIVEN TO:

REPORTED BY: David R. Paine

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Groundwater Elevations

Job No.: 091148.100 Name: David R. Paine

Client: PIERSON'S BUILDING CENTER Date: 1-14-05

Location: 4100 BROADWAY EUREKA, CA Weather: Overcast

Sample Location	Time of Reading	Top of Casing Elevation (feet)	Depth To Water (feet)	Water Surface Elevation (feet)
MW-101	0854	15.69	6.21	9.48
MW-102	0848	14.81	5.38	9.43
MW-103	0851	14.83	5.44	9.39
MW-104	0847	14.09	4.76	9.33
MW-105	0845	13.78	4.40	9.38
MW-106	0836	15.59	6.29	9.30
MW-107	0839	14.28	5.00	9.28

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EQUIPMENT CALIBRATION SHEET

Name: David R. Paine

Project Name: Pierson's Building Center

Reference No.: 091148.100

Date: 1-14-05

Equipment: ☒ pH & EC ☐ PID ☐ $GTCO_2$ ☐ GTLEL
☐ Turbidity ☒ Other Dissolved Oxygen meter YSI95

Description of Calibration Procedure and Results:

pH eEc meter is calibrated using a 2 buffer method with 7.01 and 4.01, the Ec (conductivity) is set at 1413 µS.

DO meter is self calibrating with the Altimeter set at 0.

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-101
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.10	-	6.21	=	7.89	x	0.163	=	1.29

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0945	0.91						0 gal.	
1355	↓	25	72				0.25 gal.	
1402	↓			166	57.2°	6.30	1.50 gal.	
1407	No Flow thru cell			166	57.3°	6.35	2.75 gal.	
1413				166	57.4°	6.31	4.50 gal.	
1435	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-101	3-40ml VOA's	YES HCL	NCL	TPHG
MW-101	3-40ml VOA's	YES HCL	NCL	TPH- Paint Thinner
MW-101	2-60ml VOA's	None	NCL	TPHD

Well Condition: One broken flange
Remarks:
Recharged to 6.24 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-102
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.10	-	5.38	=	8.72	x	0.163	=	1.42

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0930	1.08						0 gal.	
1226	↓	40	91				0.25 gal.	
1236	↓			661	54.9°	6.02	1.50 gal.	
1242	No Flow			658	55.1°	6.04	3 gal.	
1248	Thin cell			657	54.6°	6.05	4.50 gal.	
1345	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-102	3-40ml VOA's	YES HCL	NCL	TPHG
MW-102	3-40ml VOA's	YES HCL	NCL	TPH-Paint Thinner
MW-102	2-60ml VOA's	None	NCL	TPHD
MW-102	1-Tor soil Jar	None	Bio-Jet	Bug count

Well Condition: One broken flange
Remarks: Recharged to 5.39 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-103
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.05	-	5.44	=	8.61	x	0.163	=	1.40

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0938	0.98						0 gal.	
1312	↓	50	103				0.25 gal.	
1319	↓			277	55.1°	6.06	1.50 gal.	
1324	No Flow			288	55.3°	6.12	3 gal.	
1330	thru cell			291	55.1°	6.13	4.50 gal.	
1425	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-103	3-40ml VOA's	YES HCL	NCL	TPHG
MW-103	3-40ml VOA's	YES HCL	NCL	TPH-Paint Thinner
MW-103	2-60ml VOA's	None	NCL	TPHD
MW-103	1-9oz. soil Jar	None	Bro-Jot	Bug count

Well Condition: Good
Remarks: Recharged to 5.44 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-104
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
13.25	-	4.76	=	8.49	x	0.163	=	1.38

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0916	1.73						0 gal	
1108	↓	45	74				0.25 gal	
1115	↓			269	53.6°	6.08	1.50 gal	
1121	No Flow			271	53.7°	6.06	3 gal.	
1126	thru cell			268	53.8°	6.11	4.25 gal.	
1215	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-104	3-40ml VOA's	YES HCL	NCL	TPHG
MW-104	3-40ml VOA's	YES HCL	NCL	TPH-Paint Thinner
MW-104	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good

Remarks:
Recharged to 4.76 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-105
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
13.40	-	4.40	=	9.00	x	0.163	=	1.47

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0924	5.02						0 gal.	
1147	↓	15	65				0.25 gal.	
1155	↓			145	52.8°	6.29	1.50 gal.	
1200	No Flow			149	53°	6.33	3 gal.	
1206	thru cell			149	53°	6.34	4.50 gal.	
1300	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 4.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-105	3-40ml VOA's	YES HCL	NCL	TPHG
MW-105	3-40ml VOA's	YES HCL	NCL	TPH- Paint Thinner
MW-105	2-60ml VOA's	None	NCL	TPHD

Well Condition: One broken flange
Remarks: Recharged to 4.40 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-106
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.15	-	6.29	=	7.86	x	0.163	=	1.28

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0904	1.65						0 gal.	
0954		40	114				0.25 gal.	
1001	↓			438	55.2°	6.29	1.50 gal.	
1006	No Flow			436	55.7°	6.41	2.75 gal.	
1010	thru cell			419	55.8°	6.46	4 gal	
1015				417	55.7°	6.49	5.25 gal.	
1100	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 5.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-106	3-40ml VOA's	YES HCL	NCL	TPHG
MW-106	3-40ml VOA's	YES HCL	NCL	TPH-Paint Thinner
MW-106	2-60ml VOA's	None	NCL	TPHD

Well Condition: 3 stripped out flanges
Remarks: Recharged to 6.30 at sample Time

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Water Sampling Data Sheet

Project Name: Pierson's Building Center
Project No.: 091148.100
Location: Eureka, CA
Well #: MW-107
Hydrocarbon Thickness/Depth (feet): NA
Date/Time: 1-14-05
Sampler Name: David R. Paine
Sample Type: Ground water
Weather: Overcast
Key Needed: YES Dolphin

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
14.12	-	5.00	=	9.12	x	0.163	=	1.49

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0910	0.99						0 gal.	
1019		40	111				0.25 gal.	
1029	↓			458	55.5°	6.07	1.50 gal.	
1034	No Flow			445	55.8°	6.12	3 gal.	
1040	Thru cell			400	55.9°	6.14	4.50 gal.	
1046				377	55.8°	6.21	6 gal.	
1051				369	56°	6.21	7.50 gal.	
1135	Sample Time							

Purge Method: Hand Bail
Total Volume Removed: 7.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-107	3-40ml VOA's	YES HCL	NCL	TPHG
MW-107	3-40ml VOA's	YES HCL	NCL	TPH- Paint Thinner
MW-107	2-60ml VOA's	None	NCL	TPHD

Well Condition: Good
Remarks: Recharged to 5.02 at sample Time

Client Name: **PIERSON'S BUILDING CENTER**

The water from your site: **4100 BROADWAY EUREKA, CA**
RWQCB CASE # 1THU105

SHN ref # **091148.100** Collected On: **10/8/04**

Has been tested and certified as acceptable to be discharged into the City of Eureka municipal sewer system.

Amount Discharged: **33 GALLONS**

Date Discharged: **11/18/04**

Certified by: **DAVID R. PAINE**

SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.
City of Eureka Wastewater Discharge Permit #65

Appendix B

Historic Monitoring Data

Table B-1
Historic Groundwater Elevations
Pierson Building Center, Eureka, California

Sample Location	Date Measured	Top of Casing Elevation (feet MSL)[1]	Depth to Groundwater[2] (feet)	Groundwater Elevation (feet MSL)
MW-101	1/20/2003	15.69	6.07	9.62
	2/10/2003		6.10	9.59
	2/24/2003		5.93	9.76
	3/10/2003		6.15	9.54
	3/24/2003		5.98	9.71
	4/7/2003		5.80	9.89
	4/21/2003		5.78	9.91
	5/5/2003		5.64	10.05
	7/7/2003		6.64	9.05
	10/6/2003		7.31	8.38
	1/5/2004		4.92	10.77
	4/5/2004		4.68	11.01
	7/7/2004		6.98	8.71
	10/8/2004		7.61	8.08
	1/14/2005		6.21	9.48
MW-102	1/20/2003	14.81	5.25	9.56
	2/10/2003		5.28	9.53
	2/24/2003		5.08	9.73
	3/10/2003		5.32	9.49
	3/24/2003		5.14	9.67
	4/7/2003		4.94	9.87
	4/21/2003		4.94	9.87
	5/5/2003		4.78	10.03
	7/7/2003		5.80	9.01
	10/6/2003		6.50	8.31
	1/5/2004		4.50	10.31
	4/5/2004		4.12	10.69
	7/7/2004		6.12	8.69
	10/8/2004		6.77	8.04
	1/14/2005		5.38	9.43
MW-103	1/20/2003	14.83	5.27	9.56
	2/10/2003		5.31	9.52
	2/24/2003		5.12	9.71
	3/10/2003		5.36	9.47
	3/24/2003		5.16	9.67
	4/7/2003		4.99	9.84
	4/21/2003		4.98	9.85
	5/5/2003		4.82	10.01
	7/7/2003		5.84	8.99
	10/6/2003		6.53	8.30
	1/5/2004		4.85	9.98
	4/5/2004		4.42	10.41
	7/7/2004		6.15	8.68
	10/8/2004		6.79	8.04
	1/14/2005		5.44	9.39

Table B-1
Historic Groundwater Elevations
Pierson Building Center, Eureka, California

Sample Location	Date Measured	Top of Casing Elevation (feet MSL)[1]	Depth to Groundwater[2] (feet)	Groundwater Elevation (feet MSL)
MW-104	1/20/2003	14.09	4.62	9.47
	2/10/2003		4.64	9.45
	2/24/2003		4.45	9.64
	3/10/2003		4.66	9.43
	3/24/2003		4.49	9.60
	4/7/2003		4.31	9.78
	4/21/2003		4.32	9.77
	5/5/2003		4.16	9.93
	7/7/2003		5.18	8.91
	10/6/2003		5.85	8.24
	1/5/2004		4.26	9.83
	4/5/2004		3.87	10.22
	7/7/2004		5.48	8.61
	10/8/2004		6.10	7.99
	1/14/2005		4.76	9.33
MW-105	1/20/2003	13.78	4.25	9.53
	2/10/2003		4.28	9.50
	2/24/2003		4.04	9.74
	3/10/2003		4.31	9.47
	3/24/2003		4.13	9.65
	4/7/2003		3.93	9.85
	4/21/2003		3.94	9.84
	5/5/2003		3.78	10.00
	7/7/2003		4.82	8.96
	10/6/2003		5.52	8.26
	1/5/2004		3.55	10.23
	4/5/2004		3.30	10.48
	7/7/2004		5.14	8.64
	10/8/2004		5.78	8.00
	1/14/2005		4.40	9.38
MW-106	1/20/2003	15.59	6.09	9.50
	2/10/2003		6.12	9.47
	2/24/2003		4.65	10.94
	3/10/2003		6.19	9.40
	3/24/2003		5.99	9.60
	4/7/2003		5.86	9.73
	4/21/2003		5.80	9.79
	5/5/2003		5.69	9.90
	7/7/2003		6.64	8.95
	10/6/2003		7.32	8.27
	1/5/2004		6.00	9.59
	4/5/2004		5.51	10.08
	7/7/2004		6.95	8.64
	10/8/2004		7.58	8.01
	1/14/2005		6.29	9.30

Table B-1
Historic Groundwater Elevations
Pierson Building Center, Eureka, California

Sample Location	Date Measured	Top of Casing Elevation (feet MSL)[1]	Depth to Groundwater[2] (feet)	Groundwater Elevation (feet MSL)
MW-107	1/20/2003	14.28	4.83	9.45
	2/10/2003		4.85	9.43
	2/24/2003		5.94	8.34
	3/10/2003		4.91	9.37
	3/24/2003		4.72	9.56
	4/7/2003		4.57	9.71
	4/21/2003		5.53	8.75
	5/5/2003		4.41	9.87
	7/7/2003		5.39	8.89
	10/6/2003		6.07	8.21
	1/5/2004		4.71	9.57
	4/5/2004		4.28	10.00
	7/7/2004		6.69	7.59
	10/8/2004		6.31	7.97
	1/14/2005		5.00	9.28
MW-2A	1/20/2003	16.81	7.21	9.60
	2/10/2003		7.24	9.57
	2/24/2003		7.06	9.75
	3/10/2003		7.30	9.51
	3/24/2003		7.13	9.68
	4/7/2003		6.94	9.87
	4/21/2003		6.93	9.88
	5/5/2003		6.79	10.02
	7/7/2003		7.79	9.02
	10/6/2003		8.45	8.36
	1/5/2004		6.36	10.45
	4/5/2004		6.08	10.73
	7/7/2004		8.13	8.68
MW-3	1/20/2003	15.13	5.65	9.48
	2/10/2003		5.63	9.50
	2/24/2003		5.46	9.67
	3/10/2003		5.73	9.40
	3/24/2003		5.58	9.55
	4/7/2003		5.94	9.19
	4/21/2003		5.34	9.79
	5/5/2003		5.23	9.90
	7/7/2003		6.26	8.87
	10/6/2003		6.86	8.27
	1/5/2004		5.53	9.60
	4/5/2004		5.11	10.02
	7/7/2004		6.72	8.41

1. MSL: Mean Sea Level
2. Below top of casing

Table B-2
Historic Groundwater Analytical Results
Pierson Building Center, Eureka, California

Sample Location	Date	TPHD[1] (ug/L)[2]	TPHPT[3] (ug/L)	TPHG[4] (ug/L)	B[5] (ug/L)	T[5] (ug/L)	E[5] (ug/L)	X[5] (ug/L)	Dissolved Iron (ug/L)	Nitrate (mg/L)[6]	Nitrite (mg/L)	Ammonia Nitrogen (mg/L)	Phosphate (mg/L)	Potassium (ug/L)	Total Organic Carbon (mg/L)
MW-101	3/29/01	<50[7]	<50	120	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA
	1/20/03	130[8]	880[9]	1,400[10]	<0.50	2.3	42	89	1,000	<0.10	<0.20	<0.20	2.3	8,500	3.85
	2/10/03	340[8,12]	2,000[9]	3,300[10]	<2.5	2.5	110	318	800	<0.10	<0.20	<0.20	1.3	8,600	4.10
	2/24/03	320[8,12]	2,500[9]	4,200[10]	<2.5	<2.5	77	199	1,100	<0.10	<0.50	1.3	1.8	7,900	3.93
	3/10/03	350[8]	3,500[9]	4,400[10]	<1.0	1.9	140	431	1,400	<0.10	<0.20	<0.20	1.7	8,400	3.83
	3/24/03	350[8,12]	1,300[9]	2,400[10]	<1.0	1.7	120	343	1,700	<0.10	<0.50	0.28	1.4	8,300	3.69
	4/7/03	400[8]	1,200[9]	1,800[10]	<1.0	1.2	100	278	1,700	<0.10	<0.10	<0.20	1.4	8,500	3.66
	4/21/03	360[8]	1,300[9]	2,000[10]	<0.50	0.91	80	149	1,300	<0.10	<0.20	<0.20	1.3	8,000	3.82
	5/5/03	320[8,12]	1,800[9]	2,700[10]	<1.0	<1.0	46	67.8	2,200	<0.10	<0.20	<0.20	0.93	8,100	3.55
	7/7/03	550[8]	4,300[9]	5,900[10]	<2.0	<2.0	98	118.4	2,300	<0.10	<0.10	<0.20	1.7	6,600	3.54
	10/06/03	370[8]	1,200[9]	3,300[10]	<0.50	1.3	17	18.1	3,100	<0.10	<0.10	0.46	1.6	7,100	4.05
	1/5/04	1,400[8,12]	23,000[9]	18,000[10]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	670[8,12]	3,700[9]	5,400[10]	<0.50	<0.50	43	74.8	500	<0.10	<0.10	<0.20	0.48	<5,000	2.10
	7/7/04	1,100[8]	4,600[9]	6,400[11]	<1.0	<1.0	5.7	3.0	2,000	<0.10	<0.10	<0.20	0.78	<5,000	2.60
	10/8/04	550[8,12]	2,200[9]	2,800[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	260	960	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-102	3/29/01	320	1,300	1,600	<0.50	<0.50	0.95	<0.50	NA	NA	NA	NA	NA	NA	NA
	1/20/03	180[8]	480[9]	520[11]	<0.50	0.55	<0.50	<0.50	7,600	<0.10	<1.0	<0.20	0.41	7,300	8.79
	2/10/03	180[8]	220[9]	260[11]	<0.50	<0.50	<0.50	<0.50	8,900	<0.10	<1.0	<0.20	0.45	<5,000	10.50
	2/24/03	120[8]	180[9]	200[11]	<0.50	<0.50	<0.50	<0.50	6,600	<0.10	<0.50	<0.20	0.34	<5,000	10.10
	3/10/03	130[8]	510[9]	490[11]	<0.50	<0.50	<0.50	<0.50	6,100	<0.10	<1.0	<0.20	0.38	<5,000	8.30
	3/24/03	110[8]	130[9]	140[11]	<0.50	<0.50	<0.50	<0.50	2,500	<0.10	<0.50	<0.20	0.17	5,100	8.64
	4/7/03	170[8]	360[9]	370[10]	<0.50	<0.50	<0.50	<0.50	3,800	<0.10	<1.0	<0.20	0.21	<5,000	10.10
	4/21/03	150[8]	280[9]	290[10]	<0.50	<0.50	<0.50	<0.50	3,400	<0.10	<0.50	<0.20	0.19	<5,000	9.04
	5/5/03	120[8,12]	360[9]	400[10]	<0.50	<0.50	<0.50	<0.50	3,900	<0.10	<0.50	<0.20	0.38	5,000	9.13
	7/7/03	160[8]	420[9]	440[11]	<0.50	<0.50	<0.50	<0.50	5,200	<0.10	<0.10	<0.20	0.62	<5,000	5.87
	10/06/03	75[8]	410[9]	470[11]	<0.50	<0.50	<0.50	<0.50	8,700	<0.10	<0.10	<0.20	0.54	5,600	4.20
	1/5/04	63[12]	66[9]	54[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	110[12]	370[9]	420[11]	<0.50	<0.50	<0.50	<0.50	1,100	<0.10	<0.10	<0.20	0.63	<5,000	4.40
	7/7/04	250[8]	620[9]	550[11]	<0.50	<0.50	<0.50	<0.50	4,600	<0.10	<0.10	<0.20	0.47	5,200	2.10
	10/8/04	200[8,12]	490[9]	540[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	140	330	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B-2
Historic Groundwater Analytical Results
Pierson Building Center, Eureka, California

Sample Location	Date	TPHD[1] (ug/L)[2]	TPHPT[3] (ug/L)	TPHG[4] (ug/L)	B[5] (ug/L)	T[5] (ug/L)	E[5] (ug/L)	X[5] (ug/L)	Dissolved Iron (ug/L)	Nitrate (mg/L)[6]	Nitrite (mg/L)	Ammonia Nitrogen (mg/L)	Phosphate (mg/L)	Potassium (ug/L)	Total Organic Carbon (mg/L)
MW-103	3/29/01	910	4,200	5,300	<0.50	<0.50	12	0.6	NA	NA	NA	NA	NA	NA	NA
	1/20/03	440[8]	1,300[9]	1,300[11]	<0.50	0.53	2.3	<0.50	1,200	1.4	<0.20	<0.20	0.34	<5,000	3.82
	2/10/03	590[8,12]	1,700[9]	1,700[11]	<0.50	<0.50	3.2	<0.50	2,600	1.1	<0.20	<0.20	0.23	<5,000	3.31
	2/24/03	530[8,12]	1,000[9]	960[11]	<0.50	<0.50	3.3	<0.50	2,200	1.3	<0.50	0.3	0.4	<5,000	2.98
	3/10/03	520[8]	1,500[9]	1,400[11]	<0.50	<0.50	2.2	<0.50	4,200	0.82	<0.50	0.23	0.27	<5,000	4.29
	3/24/03	140[8,12]	1,100[9]	1,100[11]	<0.50	<0.50	2.3	<0.50	4,400	1.1	<0.50	<0.20	0.12	<5,000	3.37
	4/7/03	450[8]	1,100[9]	1,100[10]	<0.50	<0.50	2.7	<0.50	3,400	0.81	<0.10	<0.20	0.15	<5,000	3.12
	4/21/03	370[8]	710[9]	730[10]	<0.50	<0.50	1.5	<0.50	2,100	0.94	<0.30	<0.20	0.08	<5,000	3.42
	5/5/03	350[8,12]	1,200[9]	1,300[10]	<0.50	<0.50	1.6	<0.50	2,400	0.77	<0.20	<0.20	0.18	<5,000	3.18
	7/7/03	1,000[8]	4,400[9]	5,000[11]	<0.50	0.54	4.8	<0.50	13,000	0.25	<0.10	0.48	0.26	<5,000	5.69
	10/06/03	760[8]	4,000[9]	4,000[11]	<1.0	1.1	11	<1.0	31,000	<0.10	<0.20	0.87	0.92	5,900	11.10
	1/5/04	560[8,12]	1,700[9]	1,600[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	390[8,12]	1,400[9]	1,600[11]	<0.50	<0.50	3.5	<0.50	1,500	0.24	<0.10	<0.20	0.41	<5,000	4.70
	7/7/04	1,100[8]	1,900[9]	2,200[11]	<0.50	<0.50	2.9	<0.50	13,000	<0.10	<0.10	0.31	0.58	<5,000	8.40
	10/8/04	1,200[8,12]	4,300[9]	4,200[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	410	1,200	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	3/29/01	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA
	1/20/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	6.7	<0.5	<0.20	0.27	<5,000	6.56
	2/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	6.2	<0.20	<0.20	0.19	<5,000	6.44
	2/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	3.8	<0.50	<0.20	0.23	<5,000	6.60
	3/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	5.2	<0.20	<0.20	0.2	<5,000	5.44
	3/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	4.6	<0.50	<0.20	0.13	<5,000	6.69
	4/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	4.3	<0.10	<0.20	0.17	<5,000	8.22
	4/21/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	2.0	<0.10	<0.20	0.18	<5,000	7.34
	5/5/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	2.6	<0.10	<0.20	0.32	<5,000	7.47
	7/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	110	2.5	<0.10	<0..20	0.40	<5,000	3.14
	10/06/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	340	0.98	<0.10	<0.20	0.13	<5,000	4.21
	1/5/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/7/04	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	0.54	<0.10	<0.20	0.13	<5,000	2.70
	10/8/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B-2
Historic Groundwater Analytical Results
Pierson Building Center, Eureka, California

Sample Location	Date	TPHD[1] (ug/L)[2]	TPHPT[3] (ug/L)	TPHG[4] (ug/L)	B[5] (ug/L)	T[5] (ug/L)	E[5] (ug/L)	X[5] (ug/L)	Dissolved Iron (ug/L)	Nitrate (mg/L)[6]	Nitrite (mg/L)	Ammonia Nitrogen (mg/L)	Phosphate (mg/L)	Potassium (ug/L)	Total Organic Carbon (mg/L)
MW-105	3/29/01	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA
	1/20/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	4.0	<0.10	<0.20	0.42	<5,000	2.97
	2/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	2.0	<0.10	<0.20	0.25	<5,000	2.87
	2/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	3.2	<0.10	<0.20	0.23	<5,000	2.81
	3/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	1.3	<0.20	<0.20	0.49	<5,000	2.67
	3/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	2.2	<0.10	<0.20	0.57	<5,000	3.04
	4/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	3.9	<0.10	<0.20	0.40	<5,000	3.25
	4/21/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	3.0	<0.10	<0.20	0.34	<5,000	3.24
	5/5/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	6.2	<0.10	<0.20	0.30	<5,000	3.70
	7/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	130	0.61	<0.10	<0.20	<0.40	<5,.000	3.14
	10/06/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	0.23	<0.10	<0.20	0.18	<5,000	2.79
	1/5/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	0.29	<0.10	<0.20	0.12	<5,000	1.90
	7/7/04	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	0.81	<0.10	<0.20	0.10	<5,000	1.40
	10/8/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	1/20/03	120[12]	<50	<50	<0.50	<0.50	<0.50	<0.50	470	1.0	<0.10	0.99	1.6	9,300	5.84
	2/10/03	92[12]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,400	0.64	<0.20	1.0	1.2	7,900	6.36
	2/24/03	90[12]	<50	<50	<0.50	<0.50	<0.50	<0.50	770	0.95	<0.50	1.4	2.1	7,900	6.35
	3/10/03	73[8,12]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,500	1.2	<0.10	1.4	1.9	7,600	6.01
	3/24/03	83[8,12]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,400	1.6	<0.50	0.75	1.1	8,100	6.47
	4/7/03	110[13]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,300	1.4	<0.10	1.2	1.2	7,900	7.20
	4/21/03	83[13]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,300	1.5	<0.10	0.64	0.77	7,400	6.35
	5/5/03	74 [12]	<50	<50	<0.50	<0.50	<0.50	<0.50	1,300	1.9	<0.10	0.73	0.95	7,600	6.55
	7/7/03	63	<50	<50	<0.50	<0.50	<0.50	<0.50	2,200	1.1	<0.10	1.0	1.3	8,300	5.37
	10/06/03	73[12]	<50	<50	<0.50	<0.50	<0.50	<0.50	4,700	0.28	<0.10	2.1	2.2	8,700	6.34
	1/5/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	56[12]	390[9]	310[11]	<0.50	<0.50	<0.50	<0.50	390	1.7	<0.10	0.34	0.73	6,600	4.90
	7/7/04	79[12]	140[9]	240[11]	<0.50	<0.50	<0.50	<0.50	2,300	1.1	<0.10	0.99	1.1	6,700	3.90
	10/8/04	<50	56[9]	93[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B-2
Historic Groundwater Analytical Results
Pierson Building Center, Eureka, California

Sample Location	Date	TPHD[1] (ug/L)[2]	TPHPT[3] (ug/L)	TPHG[4] (ug/L)	B[5] (ug/L)	T[5] (ug/L)	E[5] (ug/L)	X[5] (ug/L)	Dissolved Iron (ug/L)	Nitrate (mg/L)[6]	Nitrite (mg/L)	Ammonia Nitrogen (mg/L)	Phosphate (mg/L)	Potassium (ug/L)	Total Organic Carbon (mg/L)
MW-107	1/20/03	210[12]	290[9]	400[11]	<0.50	<0.50	<0.50	<0.50	2,300	0.6	<0.50	1.0	1.5	9,200	4.93
	2/10/03	250[12]	620[9]	740[11]	<0.50	<0.50	<0.50	<0.50	3,200	0.45	<0.50	0.82	0.61	8,800	6.07
	2/24/03	230[12]	480[9]	550[11]	<0.50	<0.50	<0.50	<0.50	2,200	0.74	<0.50	0.88	1.3	8,300	5.30
	3/10/03	180[8]	740[9]	780[11]	<0.50	<0.50	0.58	<0.50	2,700	0.44	<0.50	0.99	0.83	8,400	5.28
	3/24/03	240[8,12]	660[9]	680[11]	<0.50	<0.50	0.7	<0.50	3,200	0.72	<0.50	0.86	0.66	8,600	5.33
	4/7/03	200[8]	430[9]	500[10]	<0.50	<0.50	0.62	<0.50	2,300	0.76	<0.10	0.89	1.0	8,400	5.56
	4/21/03	250[8]	660[9]	740[10]	<0.50	<0.50	0.87	<0.50	3,100	0.92	<0.30	0.92	0.69	8,300	5.48
	5/5/03	230[8]	560[9]	720[10]	<0.50	<0.50	<0.50	<0.50	2,900	1.5	<0.20	0.79	0.63	8,400	5.24
	7/7/03	65[12]	<50	120[11]	<0.50	<0.50	<0.50	<0.50	6,600	3.8	<0.10	1.4	0.49	11,000	6.59
	10/06/03	100[8]	140[9]	270[11]	<0.50	<0.50	<0.50	<0.50	5,500	0.76	<0.20	1.7	1.5	11,000	7.29
	1/5/04	<50	51[9]	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	810	0.51	<0.10	0.22	0.27	6,200	2.80
	7/7/04	110[8]	150[9]	170[11]	<0.50	<0.50	<0.50	<0.50	2,600	4.3	0.12	0.58	0.96	8,700	2.90
	10/8/04	68[8]	140	220[11]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/14/05	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2A	1/20/03	1,300[8]	13,000[9]	16,000[10]	<10	120	750	2,230	12,000	<0.10	<0.50	1.4	1.5	8,200	13.10
	2/10/03	1,400[8,12]	9,900[9]	12,000[11]	<10	170	830	2,320	15,000	<0.10	<1.0	1.5	1.2	8,800	4.54
	2/24/03	1,400[8,12]	13,000[9]	15,000[11]	<10	150	840	2,320	13,000	<0.10	<0.50	2.3	0.9	8,100	11.20
	3/10/03	1,200[8]	16,000[9]	17,000[10]	<10	200	1,000	2,500	15,000	<0.10	<1.0	1.5	1.4	8,300	10.20
	3/24/03	1,200[8,12]	14,000[9]	14,000[10]	<10	230	1,200	3,580	13,000	<0.10	<0.50	1.2	1.2	7,900	11.20
	4/7/03	1,600[8]	16,000[9]	17,000[10]	<10	170	990	2,870	13,000	<0.10	<0.50	0.68	0.89	8,000	10.60
	4/21/03	1,300[8]	12,000[9]	15,000[10]	<10	<10	1,000	2,660	14,000	<0.10	<0.50	1.3	1.1	7,300	13.30
	5/5/03	1,300[8,12]	14,000[9]	17,000[10]	<5.0	160	770	2,010	12,000	<0.10	<0.50	0.82	0.64	7,500	10.10
	7/7/03	1,200[8,12]	17,000[9]	22,000[10]	<10	200	1,100	2,940	11,000	<0.10	<0.10	1.0	1.7	7,400	8.57
	10/06/03	1,200[8]	13,000[9]	19,000[10]	<5.0	150	780	1,620	17,000	<0.10	<0.20	1.8	1.5	8,600	8.46
	1/5/04	1,500[8,12]	19,000[9]	22,000[10]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	1,600[8,12]	35,000[9]	36,000[10]	<15	120	1,600	4,860	2,800	<0.10	<0.10	0.20	1.0	<5,000	5.30
MW-3	1/20/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	340	6.4	<0.20	<0.20	0.12	8,200	4.16
	2/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	370	6.4	<0.20	0.30	0.094	8,700	4.54
	2/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	210	7.2	<0.30	0.22	0.073	8,400	3.81

Table B-2
Historic Groundwater Analytical Results
Pierson Building Center, Eureka, California

Sample Location	Date	TPHD[1] (ug/L)[2]	TPHPT[3] (ug/L)	TPHG[4] (ug/L)	B[5] (ug/L)	T[5] (ug/L)	E[5] (ug/L)	X[5] (ug/L)	Dissolved Iron (ug/L)	Nitrate (mg/L)[6]	Nitrite (mg/L)	Ammonia Nitrogen (mg/L)	Phosphate (mg/L)	Potassium (ug/L)	Total Organic Carbon (mg/L)
MW-3	3/10/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	430	6.7	<0.20	0.33	0.11	7,900	3.72
(cont'd)	3/24/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	220	7.5	<0.20	0.27	0.029	8,200	3.75
	4/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	300	6.3	<0.10	0.38	0.043	8,700	4.01
	4/21/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	170	7.5	<0.10	0.28	0.044	8,500	3.83
	5/5/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	200	6.6	<0.10	0.23	0.066	8,000	3.40
	7/7/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	220	6.9	<0.10	0.66	0.12	10,000	3.94
	10/06/03	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	250	6.2	<0.10	0.39	0.13	11,000	4.50
	1/5/04	<50	<50	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/5/04	<50	<50	<50	<0.50	<0.50	<0.50	<0.50	<100	0.75	<0.10	0.29	0.078	6,900	2.70

1. Total Petroleum Hydrocarbons as Diesel (TPHD) analyzed in general accordance with EPA Method No. 3550.
2. ug/L: micrograms per liter
3. Total Petroleum Hydrocarbons as Paint Thinner (TPHPT) analyzed in general accordance with EPA Method No. 5030.
4. Total Petroleum Hydrocarbons as Gasoline (TPHG) analyzed in general accordance with EPA Method No. 5030.
5. Benzene (B), Toluene (T), Ethylbenzene (E), Xylenes (X), Volatile Organic Compounds (VOCs), analyzed in general accordance with EPA Method No. 8260B.
6. milligrams per liter (mg/L)
7. <: denotes a laboratory value "less than" the method detection limit
8. Contains some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights.
9. Does not present a peak pattern consistent with that of paint thinner. The reported results represent the amount of material in the paint thinner range.
10. Appears to be similar to gasoline but certain peak ratios are not that of a fresh gasoline standard. The reported results represent the amount of material in the gasoline range.
11. Does not present a peak pattern consistent with that of gasoline. The reported results represent the amount of material in the gasoline range.
12. Contains material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.
13. Contains material similar to degraded or weathered diesel oil.

Table B-3

Analytical Results for Volatile Organics[1] in Groundwater

Pierson Building Center, Eureka, California

(units = ug/L)[2]

Sample Location	Date	MTBE[3]	Chloroform	Isopropyl-benzene	Bromo-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	sec-Butyl-benzene	n-Butyl-benzene	Naph-thalene
MW-101	01/20/03	NA[4]	<1.0[5]	12	21	<1.0	7.0	62	2.1	<1.0	2.4
	02/10/03	NA	<5.0	24	<5.0	51	32	170	6.1	<5.0	<20
	02/24/03	NA	<5.0	18	<5.0	40	24	130	5.1	<5.0	<20
	03/10/03	NA	<2.0	28	<2.0	62	64	300	7.7	4.5	46
	03/24/03	NA	<2.0	24	<2.0	56	53	250	<2.0	<2.0	45
	04/07/03	NA	<2.0	22	<2.0	50	42	190	6.1	21	30
	04/21/03	NA	<1.0	18	<1.0	36	31	120	4.7	2.1	33
	05/05/03	NA	<2.0	21	<2.0	37	27	130	3.0	4.0	24
	07/07/03	<2.0	<4.0	48	<4.0	110	110	470	15	7.1	65
	10/06/03	<0.50	<1.0	34	<1.0	75	26	57	15	8.7	35
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<1.0	2.9	30	<2.0	88	160	120	13	16	51
	07/07/04	<1.0	<2.0	27	<2.0	110	94	240	23	21	15
MW-102	01/20/03	NA	19	7.9	<1.0	22	1.6	1.0	6.4	3.2	<2.0
	02/10/03	NA	14	2.1	<1.0	7.2	<1.0	<1.0	2.5	<1.0	<2.0
	02/24/03	NA	12	7	<1.0	25	<1.0	<1.0	11	1.9	<2.0
	03/10/03	NA	8.1	3.6	<1.0	15	<1.0	<1.0	6.2	1.5	<2.0
	03/24/03	NA	11	4.2	<1.0	18	<1.0	<1.0	7.3	1.6	<2.0
	04/07/03	NA	13	4.3	<1.0	17	<1.0	<1.0	7.0	2.4	<2.0
	04/21/03	NA	12	3.1	<1.0	13	<1.0	<1.0	5.4	<1.0	<2.0
	05/05/03	NA	17	5.4	<1.0	19	<1.0	<1.0	7.7	2.7	<2.0
	07/07/03	<0.50	1.6	3.8	<1.0	17	<1.0	<1.0	8.9	1.9	<2.0
	10/06/03	<0.50	<1.0	5.8	<1.0	22	<1.0	<1.0	14	2.8	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<0.50	<1.0	5.6	<1.0	14	1.2	1.4	8.0	2.2	<2.0
	07/07/04	<0.50	<1.0	5.3	<1.0	19	<1.0	<1.0	11	3.3	2.4
MW-103	01/20/03	NA	<1.0	32	<1.0	70	<1.0	<1.0	21	11	4.9
	02/10/03	NA	<1.0	36	<1.0	91	<1.0	<1.0	21	11	6.3
	02/24/03	NA	<1.0	38	<1.0	89	<1.0	<1.0	20	8.4	9.0
	03/10/03	NA	<1.0	23	<1.0	56	<1.0	<1.0	12	5.4	8.7

Table B-3

Analytical Results for Volatile Organics[1] in Groundwater

Pierson Building Center, Eureka, California

(units = ug/L)[2]

Sample Location	Date	MTBE[3]	Chloroform	Isopropyl-benzene	Bromo-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	sec-Butyl-benzene	n-Butyl-benzene	Naph-thalene
MW-103 cont'd	03/24/03	NA	<1.0	24	<1.0	62	<1.0	<1.0	13	5.6	8.9
	04/07/03	NA	<1.0	30	<1.0	81	<1.0	<1.0	17	9.7	5.2
	04/21/03	NA	<1.0	16	<1.0	46	<1.0	<1.0	9.7	3.3	5.7
	05/05/03	NA	<1.0	29	<1.0	59	<1.0	<1.0	12	6.4	4.3
	07/07/03	<0.50	<1.0	58	<1.0	160	<1.0	<1.0	30	15	28
	10/06/03	<1.0	<2.0	140	<2.0	310	<2.0	<2.0	82	47	24
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<0.50	<1.0	33	<1.0	75	<1.0	<1.0	19	9.4	13
	07/07/04	<0.50	<1.0	56	<1.0	<1.0	<1.0	<1.0	30	19	16
MW-104	01/20/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/07/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/21/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	05/05/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	07/07/03	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	10/06/03	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	07/07/04	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
MW-105	01/20/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/10/03	NA	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/07/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/21/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	05/05/03	NA	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0

Table B-3
Analytical Results for Volatile Organics[1] in Groundwater
Pierson Building Center, Eureka, California
(units = ug/L)[2]

Sample Location	Date	MTBE[3]	Chloroform	Isopropyl-benzene	Bromo-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	sec-Butyl-benzene	n-Butyl-benzene	Naph-thalene
MW-105 cont'd	07/07/03	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	10/06/03	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<0.50	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<<1.0	<2.0
	07/07/04	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
MW-106	01/20/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/07/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/21/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	05/05/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	07/07/03	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	10/06/03	3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<0.50	<1.0	19	<1.0	15	<1.0	<1.0	14	<1.0	<2.0
	07/07/04	<0.50	<1.0	2.8	<1.0	<1.0	<1.0	<1.0	8.0	<1.0	<2.0
MW-107	01/20/03	NA	<1.0	14	<1.0	7.4	<1.0	<1.0	5.6	1.7	<2.0
	02/10/03	NA	<1.0	20	<1.0	20	<1.0	<1.0	<1.0	3.1	<2.0
	02/24/03	NA	<1.0	21	<1.0	26	<1.0	<1.0	<1.0	3.3	<2.0
	03/10/03	NA	<1.0	23	<1.0	39	<1.0	<1.0	12	4.2	<2.0
	03/24/03	NA	<1.0	27	<1.0	45	<1.0	<1.0	14	5.2	<2.0
	04/07/03	NA	<1.0	21	<1.0	34	<1.0	<1.0	11	4.3	<2.0
	04/21/03	NA	<1.0	34	<1.0	62	<1.0	<1.0	17	5.9	<2.0
	05/05/03	NA	<1.0	29	<1.0	46	<1.0	<1.0	13	5.6	<2.0
	07/07/03	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<2.0
	10/06/03	1.4	<1.0	6.9	<1.0	1.7	<1.0	<1.0	5.9	<1.0	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B-3

Analytical Results for Volatile Organics[1] in Groundwater

Pierson Building Center, Eureka, California

(units = ug/L)[2]

Sample Location	Date	MTBE[3]	Chloroform	Isopropyl-benzene	Bromo-benzene	n-Propyl-benzene	1,3,5-Trimethyl-benzene	1,2,4-Trimethyl-benzene	sec-Butyl-benzene	n-Butyl-benzene	Naph-thalene
MW-107	04/05/04	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
cont'd	07/07/04	<0.50	<1.0	13	<1.0	17	<1.0	<1.0	6.1	1.1	<2.0
MW-2A	01/20/03	NA	<20[3]	50	<20	140	140	700	<20	<20	210
	02/10/03	NA	<20	57	<20	150	140	730	<20	<20	210
	02/24/03	NA	<20	51	<20	150	140	830	<20	<20	210
	03/10/03	NA	<20	57	<20	170	150	880	<20	27	280
	03/24/03	NA	<20	63	<20	220	190	1100	20	36	350
	04/07/03	NA	<20	60	<20	170	140	830	<20	76	230
	04/21/03	NA	<20	46	<20	140	120	710	<20	<20	250
	05/05/03	NA	<10	63	<10	180	120	710	15	27	210
	07/07/03	<10	<20	88	<20	200	160	930	27	<20	340
	10/06/03	<5.0	<10	86	<10	250	110	690	27	31	310
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	<15	<30	140	<30	390	550	2,100	40	<30	580
MW-3	01/20/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<2.0
	02/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	02/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/10/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	03/24/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/07/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	04/21/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	05/05/03	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	07/07/03	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	10/06/03	6.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
	01/05/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/05/04	0.86	<1.0	4.5	<1.0	<1.0	14	1.6	<1.0	<1.0	<2.0

1. Volatile Organics by GC/MS EPA Method SW8260B
2. ug/L: micrograms per liter
3. MTBE: Methyl Tertiary-Butyl Ether
4. NA: Not Analyzed
5. <: denotes a laboratory value "less than" the method detection limit

Table B-4 Microbiological Plate Counts Pierson Building Center, Eureka, California				
Sample Location	Sample Date	Heterotrophic (1.00x105)	Selective (1.00x105)	% Degraders
MW-101	01/20/03	4.1	0.6	14.63
	02/10/03	5.7	1.9	33.33
	02/24/03	5.4	2.3	42.59
	03/10/03	4.9	1.5	30.61
	03/24/03	5.1	1.8	35.29
	04/07/03	5.7	1.6	28.07
	04/21/03	6.5	2.1	32.31
	05/05/03	6.4	2.5	39.06
	07/07/03	7.2	2.1	29.17
	10/06/03	5.9	1.1	18.64
	01/05/04	5.2	0.8	15.38
	04/05/04	4.8	0.4	8.33
	07/07/04	5.2	0.6	11.54
MW-102	01/20/03	4.8	0.9	18.78
	02/10/03	8.2	1.4	22.58
	02/24/03	6.5	1.2	18.46
	03/10/03	5.4	0.9	16.67
	03/24/03	5.7	1.4	24.56
	04/07/03	6.4	1.2	18.75
	04/21/03	6.2	1.6	25.81
	05/05/03	6.7	2.2	32.84
	07/07/03	5.6	1.8	32.14
	10/06/03	5.3	1.4	26.42
	01/05/04	5.5	0.9	16.36
	04/05/04	5.1	0.4	7.84
	07/07/04	7.2	1.1	15.28
	10/08/04	8.4	1.7	20.24
	01/14/05	9.1	2.1	23.08
MW-103	01/20/03	5.2	0.5	9.62
	02/10/03	7.1	1.5	21.13
	02/24/03	6.5	2.1	32.31
	03/10/03	5.0	2.3	46.00
	03/24/03	5.3	1.8	33.96
	04/07/03	5.7	1.9	33.33
	04/21/03	6.4	2.2	34.38
	05/05/03	6.1	1.7	27.87
	07/07/03	5.8	0.9	15.52
	10/06/03	5.1	0.6	11.76
	01/05/04	4.7	0.4	8.51
	04/05/04	4.1	0.3	7.32

Table B-4 Microbiological Plate Counts Pierson Building Center, Eureka, California				
Sample Location	Sample Date	Heterotrophic (1.00x105)	Selective (1.00x105)	% Degraders
MW-103 (cont'd)	07/07/04	6.6	2.1	31.82
	10/08/04	6.2	2.9	46.77
	01/14/05	7.2	3.5	48.61
MW-104	01/20/03	4.9	0.7	14.29
	02/10/03	5.1	1.1	21.57
	02/24/03	4.7	1.4	29.79
	03/10/03	5.5	1.1	20.00
	03/24/03	6.1	0.8	13.11
	04/07/03	5.8	0.7	12.07
	04/21/03	6.8	1.0	14.71
	05/05/03	6.5	1.3	20.00
	07/07/03	5.4	0.9	16.87
	10/06/03	4.9	0.5	10.20
	01/05/04	5.1	ND[1]	0
	04/05/04	5.3	ND	0
	07/07/04	6.0	1.1	18.33
MW-105	01/20/03	5.6	1.2	21.43
	02/10/03	5.3	1.5	28.30
	02/24/03	5.0	1.1	22.00
	03/10/03	6.1	0.8	13.11
	03/24/03	6.1	0.6	9.84
	04/07/03	6.4	0.8	12.50
	04/21/03	6.6	1.2	18.18
	05/05/03	6.3	1.5	23.81
	07/07/03	5.1	0.8	15.69
	10/06/03	5.3	0.5	9.43
	01/05/04	5.1	0.7	13.73
	04/05/04	4.9	0.5	10.20
	07/07/04	8.1	3.4	41.98
MW-106	01/20/03	5.1	0.2	3.92
	02/10/03	8.1	3.2	39.51
	02/24/03	7.5	2.4	32.00
	03/10/03	6.3	2.2	34.92
	03/24/03	5.9	1.9	32.20
	04/07/03	5.6	1.7	30.36
	04/21/03	6.2	2.1	33.87
	05/05/03	6.3	1.7	26.98
	07/07/03	5.6	1.1	19.64
	10/06/03	5.7	0.9	15.79
	01/05/04	5.3	ND	0

Table B-4
Microbiological Plate Counts
Pierson Building Center, Eureka, California

Sample Location	Sample Date	Heterotrophic (1.00x105)	Selective (1.00x105)	% Degraders
MW-106	04/05/04	5.1	ND	0
(cont'd)	07/07/04	5.4	0.4	7.41
MW-107	01/20/03	6.3	0.3	4.76
	02/10/03	5.8	0.6	10.34
	02/24/03	6.3	0.8	12.70
	03/10/03	5.8	1.1	18.97
	03/24/03	5.4	1.5	27.78
	04/07/03	5.5	1.8	32.73
	04/21/03	5.7	1.4	24.56
	05/05/03	5.9	1.6	27.12
	07/07/03	5.1	1.4	27.45
	10/06/03	5.3	0.6	11.32
	01/05/04	5.7	0.1	1.75
	04/05/04	5.2	ND	0
	07/07/04	5.2	ND	0
MW-2A	01/20/03	5.3	0.9	16.98
	02/10/03	7.2	2.7	37.50
	02/24/03	7.9	2.1	26.58
	03/10/03	6.2	2.8	45.16
	03/24/03	6.5	3.1	47.69
	04/07/03	6.0	2.7	45.00
	04/21/03	6.7	3.4	50.75
	05/05/03	7.1	3.2	45.07
	07/07/03	6.6	2.9	43.94
	10/06/03	6.0	1.9	31.67
	01/05/04	5.4	1.2	22.22
	04/05/04	6.1	1.4	22.95
MW-3	01/20/03	5.4	0.3	5.56
	02/10/03	5.8	0.9	15.52
	02/24/03	4.9	1.5	30.61
	03/10/03	5.6	1.2	20.69
	03/24/03	6.1	0.8	13.11
	04/07/03	6.6	0.5	7.58
	04/21/03	6.9	0.6	8.70
	05/05/03	6.7	1.1	16.42
	07/07/03	6.2	1.2	19.35
	10/06/03	5.6	0.8	14.29
	01/05/04	5.8	0.5	8.62
	04/05/04	5.4	0.7	12.96

1. ND: Not Detected

Table B-5
Historic Natural Attenuation Parameters
Pierson Building Center, Eureka, California

Sample Location	Date Measured	DCO_2[1] (ppm)[2]	DO[1] (ppm)	ORP[1] (mV)[3]	pH[1]
MW-101	01/20/03	50	1.60	212	6.40
	02/10/03	40	0.98	229	6.17
	02/24/03	70	1.70	275	6.25
	03/10/03	35	1.45	281	6.35
	03/24/03	55	1.33	245	6.24
	04/07/03	80	1.21	242	6.22
	04/21/03	45	2.17	151	6.17
	05/05/03	100	0.94	257	6.17
	07/07/03	70	0.62	246	6.28
	10/06/03	25	1.89	249	6.59
	01/05/04	30	2.58	263	6.19
	04/05/04	20	0.75	272	6.08
	07/07/04	45	0.52	9	5.81
	10/08/04	35	0.74	-37	6.62
	01/14/05	25	0.91	72	6.31
MW-102	01/20/03	65	1.04	245	5.85
	02/10/03	70	0.59	243	5.97
	02/24/03	65	0.49	240	6.11
	03/10/03	70	0.79	252	6.14
	03/24/03	60	0.90	268	5.97
	04/07/03	80	0.88	252	5.90
	04/21/03	60	0.69	190	5.86
	05/05/03	65	0.77	256	5.87
	07/07/03	70	0.60	247	6.17
	10/06/03	45	0.46	249	6.20
	01/05/04	NM[4]	3.21	281	5.78
	04/05/04	50	1.20	289	5.84
	07/07/04	50	0.52	0	6.61
	10/08/04	50	0.72	-14	6.41
	01/14/05	40	1.08	91	6.05
MW-103	01/20/03	40	1.88	230	5.93
	02/10/03	40	0.70	234	5.85
	02/24/03	55	0.87	239	6.11
	03/10/03	50	1.06	266	6.11
	03/24/03	45	1.66	258	6.06
	04/07/03	50	1.97	258	5.93
	04/21/03	40	1.39	82	5.72
	05/05/03	50	2.22	256	5.86
	07/07/03	80	0.47	243	5.97
	10/06/03	170	0.57	251	6.06
	01/05/04	40	2.50	275	5.72
	04/05/04	95	1.26	289	6.03
	07/07/04	NM	0.85	9	6.28
	10/08/04	65	0.70	-5	6.29
	01/14/05	50	0.98	103	6.13

Table B-5
Historic Natural Attenuation Parameters
Pierson Building Center, Eureka, California

Sample Location	Date Measured	DCO_2[1] (ppm)[2]	DO[1] (ppm)	ORP[1] (mV)[3]	pH[1]
MW-104	01/20/03	90	1.99	188	6.14
	02/10/03	25	3.49	231	5.87
	02/24/03	50	2.21	199	6.22
	03/10/03	40	2.37	252	6.27
	03/24/03	40	2.23	249	6.21
	04/07/03	60	3.24	238	6.08
	04/21/03	30	1.70	246	6.03
	05/05/03	55	1.25	247	6.07
	07/07/03	40	1.60	229	6.23
	10/06/03	40	1.56	248	5.79
	01/05/04	30	3.00	275	5.76
	04/05/04	20	0.89	271	5.91
	07/07/04	40	1.99	101	6.34
	10/08/04	60	1.56	78	6.10
	01/14/05	45	1.73	74	6.11
MW-105	01/20/03	20	4.96	230	6.50
	02/10/03	15	2.87	239	6.54
	02/24/03	25	4.30	258	6.33
	03/10/03	40	2.03	252	6.29
	03/24/03	25	3.25	253	6.26
	04/07/03	35	4.27	241	6.22
	04/21/03	20	2.94	193	6.14
	05/05/03	45	4.04	244	6.19
	07/07/03	70	1.77	241	5.89
	10/06/03	45	2.44	252	6.06
	01/05/04	25	3.38	268	6.18
	04/05/04	20	1.48	281	6.09
	07/07/04	45	1.43	100	5.14
	10/08/04	30	1.28	72	6.44
	01/14/05	15	5.02	65	6.34
MW-106	01/20/03	70	0.87	218	6.53
	02/10/03	70	1.96	232	6.48
	02/24/03	90	1.16	181	6.48
	03/10/03	85	1.03	227	6.54
	03/24/03	65	0.81	234	6.36
	04/07/03	100	1.00	239	6.31
	04/21/03	50	0.80	221	6.33
	05/05/03	95	1.44	199	6.36
	07/07/03	100	0.55	210	6.26
	10/06/03	90	0.58	268	6.46
	01/05/04	125	2.63	266	6.00
	04/05/04	50	3.08	274	6.02
	07/07/04	100	0.66	126	5.41
	10/08/04	80	1.09	101	6.49
	01/14/05	40	1.65	114	6.49

Table B-5
Historic Natural Attenuation Parameters
Pierson Building Center, Eureka, California

Sample Location	Date Measured	DCO_2[1] (ppm)[2]	DO[1] (ppm)	ORP[1] (mV)[3]	pH[1]
MW-107	01/20/03	70	0.95	256	6.41
	02/10/03	85	1.08	237	6.38
	02/24/03	100	0.49	251	6.46
	03/10/03	90	0.52	248	6.40
	03/24/03	80	0.41	244	6.32
	04/07/03	120	0.37	242	6.28
	04/21/03	65	0.33	245	6.34
	05/05/03	160	0.37	239	6.26
	07/07/03	130	0.49	224	6.05
	10/06/03	115	0.58	251	6.28
	01/05/04	70	0.69	270	6.03
	04/05/04	30	0.56	283	5.90
	07/07/04	135	0.56	100	5.27
	10/08/04	100	0.91	81	6.43
	01/14/05	40	0.99	111	6.21
MW-2A	01/20/03	75	0.28	238	6.42
	02/10/03	90	0.32	235	6.32
	02/24/03	130	0.37	288	6.24
	03/10/03	100	0.40	244	6.31
	03/24/03	80	0.33	246	6.29
	04/07/03	75	0.32	257	6.14
	04/21/03	75	0.23	222	6.20
	05/05/03	140	0.28	235	6.22
	07/07/03	95	0.33	249	6.24
	10/06/03	95	0.39	249	6.35
	01/05/04	75	0.69	275	6.19
	04/05/04	40	0.56	274	6.07
MW-3	01/20/03	60	2.62	238	6.64
	02/10/03	35	3.38	233	6.57
	02/24/03	45	3.81	239	6.67
	03/10/03	50	2.89	235	6.68
	03/24/03	35	3.40	239	6.60
	04/07/03	80	2.84	250	6.47
	04/21/03	40	3.41	215	6.53
	05/05/03	45	3.34	244	6.41
	07/07/03	60	1.79	244	8.87
	10/06/03	40	0.65	242	6.48
	01/05/04	40	4.02	273	6.30
	04/05/04	30	2.80	270	6.45

1. DCO_2 (Dissolved Carbon Dioxide), DO (Dissolved Oxygen), ORP (Oxidation-Reduction Potential), and pH measured with portable equipment.
2. ppm: parts per million
3. mV: millivolts
4. NM: not measured

Appendix C

Laboratory Analytical Reports

BioJet

Innovative Remediation Technologies

SHN Consulting Engineers	Project Name	Pierson Building Center	Sampled	1/14/05
Attn: Roland Rueber	Client Project ID		Received	1/18/05
812 W. Wabash	Sampled By:	David Paine	Plated	1/19/05
Eureka, Ca 95501	Analysis Run	Microbial Analysis	Analyzed (Physio)	
Phone 707-441-8855 Fax: 707-441-8877	Laboratory Indentification	BJ-SHN-PBS-15-2	Enumerated	1/24/05
P.O. #	Plating Concentration	100 ppm (Paint Thinner,Gas, Diesel Mix)	Reported	2/8/05
Site Location:	**BioJet Project Manager:**	**Ken Farrar 209-245-6044 Fx. 209-245-3765**		

Listed below are the results of microbial analyses, performed on Two (2) water samples collected January 14, 2005 from the Pierson Building Center site and received by the laboratory on January 18, 2005.

Samples were analyzed for General (heterotrophic, nonspecific) and selective (Paint Thinner, Gasoline, Diesel mix specific) enumerations were performed, respectively, on Plate Count Agar (nutritionally complex) and 50% Bushnell-Haas minimal salts media supplemented with Paint Thinner, Gasoline, Diesel mix (100 ppm) as the sole carbon source. Using standard microbiological plate count techniques, serial dilutions of each water sample were inoculated onto each plate and incubated, aerobically, for six (6) days at 30 degrees Celsius prior to evaluation.

Laboratory Results *

		GEN	SEL	DEG
Sample ID #	Sample Description	1.00E+05	1.00E+05	%
1	**MW-102**	**9.1**	**2.1**	**23.08%**
2	**MW-103**	**7.2**	**3.5**	**48.61%**

Signature _____

Ken Farrar, Project Manager

MC = Moisture Content (%)
pH = log Hydrogen ion Concentration
NO_3-N = Nitrate-Nitrogen (ppm)
NO_3 = Nitrate ion (ppm)
NO_2-N = Nitrite-Nitrogen (ppm)
NO_2 = Nitrite (ppm)
NH_3-N = Ammonia Nitrogen (ppm)
NH_4 = Ammonium ion (ppm)
PO_4 = Ortho-Phosphate (ppm)
K+ = Potassium (ppm)
Detection Limits for Inorganics = 0.01 -0.1 ppm
GEN = Heterotrophic Organisms (CFU * 10^5)
SEL = Selective Degrader Organisms (CFU * 10^5)
% = Percentage of Selective Degrader Organisms

REC'D JAN 2 7 2005

NORTH COAST LABORATORIES LTD.

January 24, 2005

Pierson Building Center
4100 Broadway
Eureka, CA 95501

Attn: Morgan Randall

RE: 091148.100 Pierson's Building Center

Order No.: 0501332
Invoice No.: 47696
PO No.:
ELAP No. 1247-Expires July 2006

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	MW-106
01D	MW-106
01G	MW-106
02A	MW-107
02D	MW-107
02G	MW-107
03A	MW-104
03D	MW-104
03G	MW-104
04A	MW-105
04D	MW-105
04G	MW-105
05A	MW-102
05D	MW-102
05G	MW-102
06A	MW-103
06D	MW-103
06G	MW-103
07A	MW-101
07D	MW-101
07G	MW-101

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

REPORT CERTIFIED BY

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr. Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

CLIENT: Pierson Building Center
Project: 091148.100 Pierson's Building Center
Lab Order: 0501332

CASE NARRATIVE

TPH as Diesel:
Samples MW-101, MW-102 and MW-103 contain some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights. These samples also contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

The surrogate recoveries were above the upper acceptance limit for sample MW-102 and the laboratory control sample/laboratory control sample duplicate (LCS/LCSD). The LCS/LCSD recoveries for diesel were within the acceptance limits; therefore, the data were accepted.

The relative percent difference (RPD) for the laboratory control samples was above the upper acceptance limit for diesel. The RPD was above the upper acceptance limit due to a laboratory error while fortifying the LCS/LCSD. The LCS/LCSD recoveries for diesel were within the acceptance limits; therefore, the data were accepted.

TPH as Gasoline:
Samples MW-101, MW-102 and MW-103 do not present a peak pattern consistent with that of gasoline. The reported results represent the amount of material in the gasoline range.

TPH as Paint Thinner:
Samples MW-101, MW-102 and MW-103 do not present a peak pattern consistent with that of paint thinner. The reported results represent the amount of material in the paint thinner range.

NORTH COAST LABORATORIES
5680 West End Road • Arcata, California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Date: 24-Jan-05
WorkOrder: 0501332

ANALYTICAL REPORT

Client Sample ID: MW-106 **Received:** 1/14/05 **Collected:** 1/14/05 11:00
Lab ID: 0501332-01A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		1/21/05

Client Sample ID: MW-106 **Received:** 1/14/05 **Collected:** 1/14/05 11:00
Lab ID: 0501332-01D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	ND	50	µg/L	1.0		1/21/05

Client Sample ID: MW-106 **Received:** 1/14/05 **Collected:** 1/14/05 11:00
Lab ID: 0501332-01G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	104	27.6-107	% Rec	1.0	1/20/05	1/20/05

Client Sample ID: MW-107 **Received:** 1/14/05 **Collected:** 1/14/05 11:35
Lab ID: 0501332-02A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		1/21/05

Client Sample ID: MW-107 **Received:** 1/14/05 **Collected:** 1/14/05 11:35
Lab ID: 0501332-02D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	ND	50	µg/L	1.0		1/21/05

Date: 24-Jan-05
WorkOrder: 0501332

ANALYTICAL REPORT

Client Sample ID: MW-107 **Received:** 1/14/05 **Collected:** 1/14/05 11:35
Lab ID: 0501332-02G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	95.9	27.6-107	% Rec	1.0	1/20/05	1/20/05

Client Sample ID: MW-104 **Received:** 1/14/05 **Collected:** 1/14/05 12:15
Lab ID: 0501332-03A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		1/20/05

Client Sample ID: MW-104 **Received:** 1/14/05 **Collected:** 1/14/05 12:15
Lab ID: 0501332-03D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	ND	50	µg/L	1.0		1/20/05

Client Sample ID: MW-104 **Received:** 1/14/05 **Collected:** 1/14/05 12:15
Lab ID: 0501332-03G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	103	27.6-107	% Rec	1.0	1/20/05	1/20/05

Client Sample ID: MW-105 **Received:** 1/14/05 **Collected:** 1/14/05 13:00
Lab ID: 0501332-04A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	50	µg/L	1.0		1/20/05

Date: 24-Jan-05
WorkOrder: 0501332

ANALYTICAL REPORT

Client Sample ID: MW-105 **Received:** 1/14/05 **Collected:** 1/14/05 13:00
Lab ID: 0501332-04D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	ND	50	µg/L	1.0		1/20/05

Client Sample ID: MW-105 **Received:** 1/14/05 **Collected:** 1/14/05 13:00
Lab ID: 0501332-04G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	98.6	27.6-107	% Rec	1.0	1/20/05	1/20/05

Client Sample ID: MW-102 **Received:** 1/14/05 **Collected:** 1/14/05 13:45
Lab ID: 0501332-05A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	380	50	µg/L	1.0		1/21/05

Client Sample ID: MW-102 **Received:** 1/14/05 **Collected:** 1/14/05 13:45
Lab ID: 0501332-05D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	330	50	µg/L	1.0		1/21/05

Client Sample ID: MW-102 **Received:** 1/14/05 **Collected:** 1/14/05 13:45
Lab ID: 0501332-05G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	140	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	115	27.6-107	% Rec	1.0	1/20/05	1/20/05

Date: 24-Jan-05
WorkOrder: 0501332

ANALYTICAL REPORT

Client Sample ID: MW-103 **Received:** 1/14/05 **Collected:** 1/14/05 14:25
Lab ID: 0501332-06A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	1,200	500	µg/L	10		1/21/05

Client Sample ID: MW-103 **Received:** 1/14/05 **Collected:** 1/14/05 14:25
Lab ID: 0501332-06D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	1,200	500	µg/L	10		1/21/05

Client Sample ID: MW-103 **Received:** 1/14/05 **Collected:** 1/14/05 14:25
Lab ID: 0501332-06G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	410	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	105	27.6-107	% Rec	1.0	1/20/05	1/20/05

Client Sample ID: MW-101 **Received:** 1/14/05 **Collected:** 1/14/05 14:35
Lab ID: 0501332-07A

Test Name: TPH as Gasoline **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	1,300	500	µg/L	10		1/21/05

Client Sample ID: MW-101 **Received:** 1/14/05 **Collected:** 1/14/05 14:35
Lab ID: 0501332-07D

Test Name: TPH as Paint Thinner **Reference:** EPA 5030/GCFID(LUFT)

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPH-Paint thinner	960	500	µg/L	10		1/21/05

Date: 24-Jan-05
WorkOrder: 0501332

ANALYTICAL REPORT

Client Sample ID: MW-101 **Received:** 1/14/05 **Collected:** 1/14/05 14:35
Lab ID: 0501332-07G

Test Name: TPH as Diesel **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	260	50	µg/L	1.0	1/20/05	1/20/05
Surrogate: N-Tricosane	97.0	27.6-107	% Rec	1.0	1/20/05	1/20/05

North Coast Laboratories, Ltd.

Date: 24-Jan-05

CLIENT: Pierson Building Center
Work Order: 0501332
Project: 091148.100 Pierson's Building Center

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-1/20/05** Batch ID: **R32958** Test Code: **TPHCGW** Units: **µg/L** Analysis Date: **1/20/05 10:35:42 PM** Prep Date:
Client ID: Run ID: **ORGC8_050120A** SeqNo: **477921**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	ND	50									

Sample ID: **MB-12820** Batch ID: **12820** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **1/20/05 4:52:51 PM** Prep Date: **1/20/05**
Client ID: Run ID: **ORGC7_050120A** SeqNo: **478085**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	42.60	50									J
N-Tricosane	50.8	0.10	50.0	0	102%	28	107	0			

Sample ID: **MB-1/20/05** Batch ID: **R32959** Test Code: **TPHPTW** Units: **µg/L** Analysis Date: **1/20/05 10:35:42 PM** Prep Date:
Client ID: Run ID: **ORGC8_050120B** SeqNo: **477934**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Paint thinner	ND	50									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: 24-Jan-05

CLIENT: Pierson Building Center
Work Order: 0501332
Project: 091148.100 Pierson's Building Center

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-05049** Batch ID: **R32958** Test Code: **TPHCGW** Units: **µg/L** Analysis Date: **1/20/05 8:18:58 PM** Prep Date:
Client ID: Run ID: **ORGC8_050120A** SeqNo: **477918**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	508.8	50	500	0	102%	81	126	0			

Sample ID: **LCSD-05049** Batch ID: **R32958** Test Code: **TPHCGW** Units: **µg/L** Analysis Date: **1/20/05 8:53:16 PM** Prep Date:
Client ID: Run ID: **ORGC8_050120A** SeqNo: **477919**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	499.5	50	500	0	99.9%	81	126	509	1.84%	15	

Sample ID: **LCS-12820** Batch ID: **12820** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **1/20/05 3:00:39 PM** Prep Date: **1/20/05**
Client ID: Run ID: **ORGC7_050120A** SeqNo: **478082**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	442.6	50	500	0	88.5%	80	120	0			
N-Tricosane	60.9	0.10	50.0	0	122%	28	107	0			S

Sample ID: **LCSD-12820** Batch ID: **12820** Test Code: **TPHDIW** Units: **µg/L** Analysis Date: **1/20/05 3:19:20 PM** Prep Date: **1/20/05**
Client ID: Run ID: **ORGC7_050120A** SeqNo: **478083**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	962.2	50	1,000	0	96.2%	80	120	443	74.0%	15	R
N-Tricosane	54.2	0.10	50.0	0	108%	28	107	60.9	11.7%	15	S

Sample ID: **LCS-05048** Batch ID: **R32959** Test Code: **TPHPTW** Units: **µg/L** Analysis Date: **1/20/05 6:01:12 PM** Prep Date:
Client ID: Run ID: **ORGC8_050120B** SeqNo: **477931**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Paint thinner	490.2	50	500	0	98.0%	70	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pierson Building Center
Work Order: 0501332
Project: 091148.100 Pierson's Building Center

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

Sample ID: **LCSD-05048** Batch ID: **R32959** Test Code: **TPHPTW** Units: **µg/L** Analysis Date: **1/20/05 6:35:45 PM** Prep Date:

Client ID: Run ID: **ORGC8_050120B** SeqNo: **477932**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Paint thinner	488.5	50	500	0	97.7%	70	120	490	0.338%	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER:

Attention: Morgan Randall
Results & Invoice to: Pierson's Building Center
Address: 4100 Broadway
Eureka CA 95501
Phone: 441-2700
Copies of Report to: SHN Roland Rueber
812 W. Wabash Ave. Eureka CA 95501-2138
Sampler (Sign & Print): David R. Paine David R. Paine

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☒ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☐ Verbal ☐ By:__/__/__
Final Report: FAX ☐ Verbal ☐ By:__/__/__

PROJECT INFORMATION
Project Number: 091148.100
Project Name: Pierson's Building Center
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	CONTAINER	PRESERVATIVE	TPH G	TPH Diesel Thinner	TPHD
	MW-106	1/14/05	1100	GW	9	b	X	X	X
	MW-107		1135				X	X	X
	MW-104		1215				X	X	X
	MW-105		1300				X	X	X
	MW-102		1345				X	X	X
	MW-103		1425				X	X	X
	MW-101	↓	1435	↓	↓	↓	X	X	X

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

EDF

Global ID # T0602302096

5°C

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
D.R. Paine David R. Paine	1525 1/14/05	[signature] 1/14/05	1525

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus (Hand)

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT